

MARINE RECORD

ESTABLISHED 1878.

VOL. XX. No. 51.

CLEVELAND---DECEMBER 23, 1897---CHICAGO.

\$2.00 Per Year. 10c. Single Copy

UNDER WHICH FLAG?

In May last the Norwegian steamer Solverg was partially destroyed by fire at Newport News. The damaged hull was purchased by Hogan & Sons, of New York, who had her repaired and who have now had her registered as an American vessel, so that they can run her in the coast trade between New York and Galveston. Her name is now the Merrimac. An effort to keep this foreign-built vessel from engaging in the United States' coastwise trade is being made by William Cramp & Sons, of Philadelphia, conjointly with several other vessel builders and owners. The application and protest have both been filed at the New York custom house and have been forwarded to Washington, where they will be considered by the Commissioner of Navigation. The owners of the Merrimac claim that she is qualified to registry under the law, that when a vessel is wrecked on the coast of the United States, and so rebuilt in this country that the work done represents three-quarters of her value, she shall be entitled to American registry. Those who signed the protest allege, it is said, that in the past foreign hull vessels have obtained American registry illegally, one of their contentions being that the Merrimac was not wrecked, but burned, and so does not come under the law. The American Shipbuilder says that Arthur Sewall, of Bath, Me., is opposed to any measure that will not allow a burned foreign vessel to be placed under the American flag, as he obtained a registry for his British-built ship Kenilworth, which was burned, instead of being wrecked, in the harbor of San Francisco.

"TERRESTRIAL MAGNETISM."

The Department of the United States Navy, Hydrographic Office, has published researches by Mr. G. W. Littlehales, dealing with terrestrial magnetism and the magnetic dip of inclination. The compilation has evidently been a work of considerable labor, involving care and accuracy at every step, and consists in arranging observations taken by many observers, over a great number of years, at thirty of the principal maritime stations, equations being compiled therefrom for each station from which values may be predicted and annual rates of change found.

How diverse the stations are may be gathered from the following examples picked from the list: Aden, Cape of Good Hope, Halifax, N. S., Honolulu, Nagasaki, Bombay, Cartagena, etc. All the observations made at each station are given separately, together with the probable error of a single observation, and the empirical equation for determining the inclination for any year. The information given cannot but prove of the utmost value in deducing the values of the rates of secular change of the magnetic inclination, and in bringing forward such values from one epoch to another, and also for the aid it will afford in transferring the lines of equal magnetic inclination published on charts for past epochs to their respective positions at the present or some future time. An excellently executed and large size map of the world, showing the secular change in the direction of the magnetic needle, is bound in the volume.

THE IRON ORE INDUSTRY.

Iron ore shippers have begun footing figures on the largest volume of business ever done in the history of the Lake Superior iron ore trade, says the Iron Trade Review. What has been lacking in market prices has been made up in some instances by enlarged tonnage; yet the season has given further proof of the drift of ore selling to fewer hands. Should the effort be renewed to include Mesaba mines in the Bessemer Ore Association, the new range with its total of 4,280,000 tons will be in position to make a strong stand for percentage. Yet there is less to fear from over-production than in recent years. An enormous output will be called for by the market and the price will be such that only strong

producers will be able to make money. The process of elimination will bear severely here and there, but it is not in the drift of things that the strong majority should adopt a policy suggested by the necessities of the weaker few.

ACETYLENE GAS BUOY.

Col. D. P. Heap, Corps of Engineers, U. S. A., Light-House Department, has been testing a big new gas buoy, which will be placed in the main channel to New York harbor.

All who have traveled upon the lakes are familiar with the gas buoys used at several points. The new one now being tested resembles these very much in outward appearance, but it manufactures its own gas. It burns acetylene, which is generated in the buoy from carbide of calcium. The light is said to be remarkably powerful.

STATE GRAIN ELEVATORS AT BUFFALO.

At a largely attended meeting of the State canal boat owners held in New York, resolutions were passed urging the erection by the State of grain elevators at Buffalo and New York. In the words of the resolution this action "would guard the State's essential grain traffic from the wanton attacks of the railroad, grain elevator trust located at the aforesaid ports." It was also resolved that "it is the imperative duty of the commonwealth" to prohibit railroad corporations, which receive their charters or licenses from the State of New York, from discriminating in freight rates against the port of New York, against the State, or against shippers by canal.

INSPECTING NEW LIGHT-HOUSE WORK.

Maj. W. S. Stanton, Corps of Engineers, U. S. A., stationed at Oswego, N. Y., in charge of all light-house work in that district, and Inspector J. P. Bumpus, were in Sandusky this week examining the new bay range lights now being constructed on the "Middle Ground." The beacon tower, off the east point of Johnsons Island, is rapidly nearing completion, and Contractor Rabbitt is at work on the keeper's dwelling. Major Stanton and Inspector Bumpus expressed themselves as being well pleased with the work as far as it has progressed. The new lights will be completed in a few weeks. Major Stanton has been appointed to this detail to relieve Col. Jared A. Smith, stationed at Cleveland.

MINIMUM RATES ON IRON ORE AND COAL.

At the meeting of the Executive Committee of the Lake Carriers' Association, held in Cleveland last week, the rate talked of was 30 cents on coal and 70 cents on Duluth ore, with proportionate rates from Marquette and Escanaba, but nothing was definitely determined upon. Some of the owners are contending that the Lake Carriers' Association was responsible for the deep waterway movement which has proved so disastrous to small and medium sized craft. They were not. That scheme originated at St. Paul, Duluth and in several lake ports, as well as New York taking a hand. The deal went through and Congress had made an appropriation therefor, before the present Lake Carriers' Association had organized. Of course many of its members were in favor of the deep channel, but it was not the association that started the movement.

Mr. A. A. Parker, of Detroit, who is the moving spirit at this time in the minimum freight rate project is quoted as saying: "The Lake Carriers' Association is responsible for the fine system of lighting in the lakes and rivers, and any improvements it has attempted have so far been successful and a benefit to all vessel men. I think the present movement in fixing the minimum freight rate would soon meet the approbation of all the owners and shippers."

JAPANESE CRUISER AT CRAMP'S SHIPYARD.

The Japanese cruiser Kasagi, which has been in process of construction at the Cramp's shipyards for about 11 months, is nearly ready for launching. The vessel is 374 feet 6 inches between perpendiculars, has a breadth of 48 feet 9 inches, a molded depth of 30 feet 6 inches, and will draw 7 feet 9 inches of water. Her displacement will be 4,900 tons; she is calculated to speed 22½ knots an hour, and her engines are to have an indicated horse-power of 17,000.

The armament for the cruiser consists of two 8-inch quick-firing rifled guns, mounted behind protective shields, fore and aft, with ten 4.7-inch quick-firing rifles mounted on the broadsides. This makes up the main battery, and it is supplemented by twelve 12-pounders, rapid fire, and six 2½-pounder Hotchkiss guns, besides five torpedo tubes for 14-inch torpedoes. This arrangement of the guns is the simplest known to naval architects, and is considered the most effective for quick and concentrated fire.

The defensive strength of the ship consists of a belt of light protective armor and a protective steel deck. This is in reality a steel shell that slopes upward from all around the hull below the water line, thus protecting the ship's vulnerable parts. This deck is 4½ inches thick on the slopes and 1¼ inches on the flat top.

Work on the powerful engines of the vessel has been progressing for about two months, and after the launching they will at once be placed in position. It is estimated that a little over a year will be required yet before the cruiser can be completed.

The Navy Department at Washington has received information to the effect that a contract has been placed with an English firm for three new torpedo boats for the Russian Navy that will be easily the fastest war craft in the world. Their minimum speed capacity is placed at 38 knots per hour. As this immense speed will demand greater power than can be supplied by the ordinary type of torpedo boat engines, the craft are to be driven by steam turbines, having four separate shafts with three propellers on each shaft.

GEORGIAN BAY CANAL TO MONTREAL.

It is stated in Montreal that Mr. McLeod Stewart who went to England some time ago to organize a company for the construction of a canal from the Great Lakes via Georgian Bay, the Nipissing and Ottawa rivers to Montreal, has succeeded in accomplishing his object, and Sir Benjamin Baker, engineer of the Forth Bridge, will be consulting engineer, the work to begin early next spring and to be completed in three years. If built, this canal will certainly supply the most direct route for trans-Atlantic commerce between Great Britain and the Great Lake ports, as barges from Chicago and other cities could be towed through this canal direct to Montreal, and there tranship their cargoes to large steamers. The number of locks in this canal would be not more than three or four, as compared with the dozen or two on the Lake Ontario and St. Lawrence river route, besides the canal being very much shorter.

BIDS FOR A SMALL NEW STEAMER.

There were three bids on the new steamer to be built for harbor use at Buffalo. All were opened Wednesday by Major Symonds, Corps of Engineers, U. S. A., for which department the craft is required. The Union Dry Dock Co. and David Bell, of Buffalo, bid \$12,900 each, and the Craig Ship Building Co., of Toledo, \$11,970. The boat is to be 70 feet over all, 15 feet beam and 8 feet deep. The engines are to be compound condensing, cylinders 12 and 22-inch bore by 16-inch stroke, with a water-tube boiler. The hull will be of steel. No award has been made yet, though the contract will no doubt go to Toledo, after due authority has been given to Major Symonds to place the order.

NEWS AROUND THE LAKES.

CHICAGO.

Special Correspondence to The Marine Record.

H. F. Otto, chief engineer of the steamer H. L. Worthington, left here for his home at Manistee on Tuesday.

At the Chicago Ship Building Co.'s shipyard the steamer Selwyn Eddy is in dock receiving some new bottom plates. The steamer Madagascar is unloading a cargo of bituminous coal at the O. S. Richardson Fueling Co.'s north pier dock.

Asa Leopold, the well-known marine agent of the S. O. Co., is enjoying a well-earned vacation, after skirmishing daily around the river during the past long season and fighting heroically for the standard he upheld.

A number of vessels have been chartered here at 3 cents on corn to Buffalo to hold until the spring and some at a shade less. On Tuesday the shippers were offering 2½ cents. Many vesselowners prefer to hold their vessels over until after the holidays when they expect better freights.

The steamer Edward Buckley, Capt. Charles Gnewuch, which arrived here Friday with lumber from Manistee, left here Tuesday afternoon for Manistee to go into winter quarters. The Buckley made during the past season 56 round trips to Lake Michigan ports and one trip to Cleveland and Ashtabula.

The Buffalo grain shoveling contract will again be a subject of consideration at the annual meeting of the Lake Carriers' Association in Detroit next month. Propositions from labor unions will not be considered, as there would be no responsible parties to deal with in the unions, but vesselowners who were opposed to giving the work to Contractor Kennedy a year ago on the claim that profit in the business was very great are again lending support to a movement to have a responsible contractor in Buffalo put in a bid at a figure considerably lower than that of a year ago.

The Independent tug line Welcome towed the schooner Olive Jeanette, light, from Milwaukee Sunday; their tug C. M. Charnley, the steamer L. R. Doty from Manitowoc, arriving here on Sunday, and their tugs Hall and Welcome, the steamer Senator to South Chicago on Sunday. The Senator went to Bartlett & Frazier's elevator to load grain during the past week. Steamers Servia, Bielman, St. Lawrence, Yakima, Elfinmere, L. R. Doty, Phillip Minch, S. R. Kirby, and Iron King, schooners Iron Cliff, Iron Queen, Granada, D. P. Rhodes and Yukon.

The steel steamer now being built by the Chicago Ship Building Co. to the order of Elphicke & Orr will be named William R. Linn. Her keel length is 400 feet; length over all, 420 feet; beam, 48 feet; molded depth, 28 feet. The water bottom capacity is figured at 2,400 tons. She will have a quadruple expansion engine and water-tube boilers. The outfit is to be modern throughout. The carrying capacity of the Linn is estimated at 6,000 tons on 17 feet, and she is expected to average 12 miles per hour. The estimated cost complete is \$210,000, and she is to be ready for service by April 1st.

The stocks of grain in Chicago elevators on last Saturday evening were 7,793,000 bushels of wheat, 17,408,000 bushels of corn, 1,495,000 bushels of oats, 592,000 bushels of rye, and 883,000 bushels of barley. Total, 28,171,000 bushels of all kinds of grain, against 24,000,000 bushels a year ago. For the same date the Secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 35,565,000 bushels of wheat, 38,539,000 bushels of corn, 14,383,000 bushels of oats, 3,645,000 bushels of rye, and 4,605,000 bushels of barley. These figures are larger than corresponding ones of a week ago by 821,000 bushels in wheat, smaller by 2,141,000 bushels in corn, and larger by 34,000 bushels in oats. The visible supply of wheat for the corresponding week of a year ago increased 879,000 bushels.

The large steel steamer City of Bangor, which arrived here last Friday from Duluth with wheat, could not get up the river farther than Galena elevator until about 11,000 bushels of wheat had been lightered, after which she was towed to Armour's A. elevator to unload the remainder of her cargo of 160,000 bushels of wheat. The lightering was done by the O. S. Richardson Fueling Co.'s floating derrick on to canal boats. The Bangor struck a boulder when just outside of the Canadian canal at Sault Ste. Marie, punching a hole in her bottom and flooding two of the compartments of her water bottom. She was drawing 16 feet 5 inches forward and 16 feet 7 inches aft before striking and about one foot more when she arrived here. She will go to the Chicago Ship Building Co.'s shipyard for survey and repairs when unloaded.

Two passenger steamers, the Iowa, of the Goodrich line, and the Petosky, of the Huron line, collided off Kenosha on Sunday. The Petosky was bound for Milwaukee and the Iowa for Chicago. The extent of the damage was not serious enough to prevent the steamers from completing their trips. Capt. Guigan, of the Petosky, says that Capt. Stines, of the Iowa, gave one blast of his whistle notifying he would take the inside track. The steamers could not slacken speed soon enough to prevent the Petosky running into the Iowa. The Petosky was only slightly damaged. Now let the local inspectors locate the cause of these two passenger steamers coming together so that the supervising inspector of the district can amuse himself by rendering their judgment or verdict defunct, nil, void and reverse the whole proceeding to the evident satisfaction, peace of mind and enjoyment of the locals.

First mate Wm. H. Egan, of the Iowa, gives the following account of the circumstances connected with the collision: "When I went on deck soon after midnight my attention was called to the lights of a steamer ahead by the

officer whose watch I had relieved. The steamer appeared to be about 7 or 8 miles off and coming toward us. When we approached each other to within about 3 miles I blew one whistle but received no response. I waited two or three minutes and then blew one whistle again and I received one whistle in reply. As the steamers were nearing each other rapidly I saw by the steamer's light that she was not going to port. I put the Iowa's wheel hard a port and blew a danger signal of five sharp blasts. The Petosky stopped and backed, but too late to prevent the collision and she struck the Iowa near the passenger gangway on the port side. The Iowa received considerable damage to her covering board, stanchions, rail and upper deck and the Petosky some damage to her stem. Fortunately, no one was injured and the steamers arrived safely at their respective ports."

DETROIT.

Special Correspondence to The Marine Record.

The big wrecking tug Favorite is laid up at Cheboygan. The Wallula and Bulgaria will winter at this port and receive extensive repairs.

The keel for the third new Bessemer boat is being laid in Wheeler & Co.'s yard, West Bay City.

The Detroit Dry Dock Engine Works has closed a contract for a compound engine and two boilers for a stern paddle wheel boat, to be used on the Yukon.

The new mail boat Florence B., was taken off the station this week. The number of pieces of mail handled by the marine postoffice during the season of 1897, will reach nearly 230,000, against 175,000 for last season.

The whaleback steamer Thomas Wilson is in the Detroit dry dock having some bent plates straightened, and receiving a general overhauling. The Wilson will be equipped with the Howden hot draft system during the winter.

The Detroit Dry Dock Co. has closed a contract for a new steamer, a sister boat to the Dunbar & McMillan steamer now building at Wyandotte. She will be used for the Puget Sound trade. She will be built at Wyandotte and then taken apart and shipped by rail to the Pacific coast.

The Ann Arbor road has opened winter navigation by starting the steamer J. C. Ford for Keweenaw, from Frankfort. The Alice Spafford is already on the winter route between Manistique and Frankfort. The Spafford is running for the "Soo" line.

The Raleigh, the last boat of the season bound for Lake Michigan, passed Detroit on Wednesday morning. Judging from the amount of ice in the river she will have a hard time in reaching her destination. Her consort the Tokio was not with her. The moment she stuck her nose around Sandwich point she commenced to blow for the mail boat. She got no mail at Detroit.

The Light-House Board at Washington or the district officers have been somewhat hasty again this season in taking in light-ships and other aids to navigation. An unusual watch ought to be kept on this feature and the wires used to prevent a premature closing of general or special sailings in the future and when changes are made in the detail of a new inspector for the district.

The Detroit Dry Dock Co., which secured the contract for the new package freight steamer for the Western line, will take the old steamers Badger State and Empire State in part payment. The Western Transit Co. will be allowed \$30,000 for the old boats, which were built in 1862 and 1863. These boats have always been well kept up and given everything in the way of modern equipment so that it is very likely that the Dry Dock Co. will make a good sale of the two steamers before next season opens.

Owen Williams, one of the oldest engineers on the lakes, died in Chicago last Sunday. While going aboard the Me-costa, of which he had been chief engineer for a number of years, he fell into the river. He thought he was none the worse and went on with his work. Pneumonia carried him off. He was engineer of the old side-wheeler S. Clement of the Ward line, and later bought out the tugs Merrick and John Owen. Then he served 11 years in the steam yacht Lillie, and afterward went into the Idler.

The crew of Thunder Bay Island life-saving station has preferred charges of neglect of duty against their captain, John D. Persons, and sent them to department headquarters. They allege that when the burning steamer Egyptian was sighted off the island, the captain refused to go out or investigate, and that when the steamer Sicken, bound for Alpena ran behind Scare Crow Island and signaled, the captain failed to respond, although the crew were ready. There has been trouble between the captain and crew for two years past.

The steamer Venezuela of the Davidson fleet, bound for Milwaukee with a cargo of coal, passed the Straits of Mackinac Tuesday morning. She was accompanied as far as Waugoshance by the tug Swain. There is some floating ice in the Straits. The steamer Yale left Gladstone for Chicago at noon Tuesday. The steamers A. P. Wright, J. C. Gilchrist and City of Naples are bound for Gladstone with coal cargoes. The tug Swain will probably go to Gladstone from the Straits with the steamer Appomattox. While assisting the big steel steamer Yale to Gladstone ice stove a hole in the bow of the Escanaba Towing & Wrecking Co.'s tug Monarch and she had to be run ashore in order to prevent her sinking.

Mr. David Carter, general manager of the Detroit & Cleveland Navigation Co. has been in that employ for a period of 46 years and he is good for quite a long spell yet. There is not a more conservative, careful and generally well-liked steamboat manager on the lakes, a fact which all of the officers of the company afloat and ashore will amply testify to. Every year as soon as the last boat of the line is laid up, Mr. Carter invites the employees of the company to a

banquet. In days gone by these feasts were held at his residence, but the number of employes has increased to such an extent that the annual gathering has been transferred to one of the boats. This year, the twenty-first of these functions was held on Tuesday aboard of the steamer City of Detroit, and a right elegant time all hands had, too.

With the arrival of the City of Detroit from Cleveland on Sunday morning, the season for the D. & C. line, one of the best in its history, came to an end. The City of Detroit was in commission over nine months, or from March 13 to Dec. 19, and made 174 round trips between Detroit and Cleveland, covering over 38,000 miles. The City of Alpena, on the Lake Huron division, covered more than 50,000 miles during her season. When the City of Cleveland and the City of Detroit come out in the spring they will be practically new boats and will be thoroughly up to date in every respect. The Company expects to spend during the winter at least \$100,000 on the boats of the line and the expense will likely run beyond these figures. At a low estimate, 150 men will be kept at work on them all winter. Each boat is to receive steel paddle boxes in place of the wooden ones now in use. About 132 new state rooms will be fitted in the fleet, giving the accommodation of an extra boat as the largest steamer only had 137 state rooms all told. Vinton & Co. are doing the carpenter work, the Detroit Dry Dock Co. the steel work, Wright & Co., the decorating, and the Detroit Sheet Metal & Brass Works the interior work.

CLEVELAND.

Special Correspondence to The Marine Record.

Mr. M. A. Bradley will after this week be located in the Ajax building on St. Clair street.

Mr. L. C. Hanna is to be nominated for Lieutenant Commander of the Cleveland Naval Reserves.

The whaleback barge 107, which brought a cargo of wheat here from Duluth, is being unloaded. Part of her cargo is damaged.

The fishing tug Fishing Queen, foundered in Lake Erie near this port on Saturday. The crew took to the small boat and were saved.

Nearly six hundred men are now on the pay rolls of the Cleveland Ship Building Co. at their new shipyard, dry dock and in other departments at the Lorain works.

The Corrigan steamer Aurora and consort Aurania, arrived at Fairport on Monday with grain cargoes from Toledo. The steamer will make another trip to Toledo.

Capt. Sam W. Gould will give instruction this winter to pilots desirous of passing an examination before the board of local inspectors for original or higher grade licenses.

The annual ball given by the employees of the Vessel Owners' Towing Co. took place Wednesday night at Army and Navy Hall. The utmost enjoyment was taken aboard by all hands.

Mr. Robert Logan, consulting engineer, surveyor and marine architect, is one of the busiest men in marine circles just at this time as his services are in demand at all the principal lake ports.

The large steel steamer Coralia, of the Mutual line, will be fitted with the Ellis and Eaves induced draft this winter at the yards of her builders, the Globe Iron Works Co. The Coralia is considered one of the largest and staunchest built boats on the lakes.

Capt. E. T. Rattray is kept busy these times looking after new work and repairs in the fleet owned by the Lake Superior Iron Co. The work is being done at the yards and docks of the Ship Owners' Dry-Dock Co., a large and expensive iron plant having been added to the facilities at these yards.

The Meswald case, which has been dragging along in the probate court for several years, was decided by Judge White Wednesday. The estate will go to Michigan for administration. The judge decided that Capt. Meswald, was the last to drown and therefore that his wife succumbed first. This is in accordance with the French law on the subject.

The steamer Republic is still in the Ship Owner's Dry Dock and it will take about two weeks yet to finish repairs. The whaleback E. B. Bartlett also docked this week for calking and some minor work. The Sitka for repairs to stern bearings. Work is planned well ahead and a large force of men is given steady employment at the yards, dry-docks and steel repairing plant.

The winter meetings of the American Association of Masters and Pilots have been resumed, the first gathering having taken place at No. 94 Superior street on Monday night last. Meetings will be held every Monday night until spring. On next Monday night officers will be elected. Capt. C. A. Benham and Frank Place were nominated as delegates to the Washington meeting.

The steamer J. H. Pauly arrived at Sandusky on Monday from Bay City with salt. She cleared again on Tuesday for Bay City, it being the intention of her owners to load her there for this port with salt, and after her cargo is discharged to send her to Detroit to winter. This is considered late navigation on Lake Erie, and yet the Pauly is not one of the most powerful vessels on the lakes either.

If Cleveland is to have one of the two recently built revenue cutters stationed at this port some tall hustling will have to be done at the Treasury Department, both the Algonquin and the Onondaga are now afloat, the latter launched from the shipyards of her builders, the Globe Iron Works Co., to-day. It now appears that other lake cities are doing their best to convince the department to assign the vessels when completed to them, and among those employing the greatest pressure are Erie and Detroit. Capt. Shoemaker, chief of the revenue cutter service, has stated that if Congress cuts down the appropriation for his division, it was possible the Algonquin and Onondaga would not be

equipped when they are completed next spring. At the same time there is every reason to advance the claims of this port as the station for a revenue cutter. Chicago, Buffalo and Detroit are headquarters for departmental tonnage, revenue and light-house service, but the great port of Cleveland only receives an occasional call whereas it is entitled to a first consideration.

Capt. George P. McKay, treasurer and chairman of committee on aids to navigation in the Lake Carriers' association, has had his labors lightened very materially this season by the Prime-McCurdy syndicate of underwriters, who have taken up this feature of lake navigation in an aggressive and progressive manner. Capt. F. D. Herriman has no doubt also done much towards elevating the standard of lake masters and pilots.

The steel steamer, German, of the Menominee line, is docked in the Cleveland dry-dock for repairs to bottom damage. Twelve shell plates and about thirty frames will be renewed and it is expected to get her out of dock early on Saturday morning, when the Saxon, of the same line, will be dry-docked for survey, thorough overhauling and all necessary repairs. In this connection it is noted that the Menominee and Mutual line boats are all being placed in the best possible condition this winter, and the same may be said of other large lines of steamers owned or managed at this port.

Mr. Henry West, of the Cramp Ship Building Co., Philadelphia, was in Cleveland Wednesday with a number of other shipbuilders, looking at an automatic riveting machine, which operates by pneumatic power, and which has been placed in use by the Globe Iron Works Co. They left in the evening for Wyandotte, Mich., to inspect one of the machines in use by the Detroit Dry Dock Co. there. In the party besides Mr. West were Mr. F. A. Kirby, of Wyandotte; Mr. James Henning, of Wyandotte; and Mr. J. W. Duntley and Mr. J. F. Duntley, of Chicago. Mr. J. F. Duntley remained in Cleveland to go to Lorain to view the plant of the Cleveland Ship Building Co.

It looks as if that \$12,000 contract for a small new steamer for the use of the government engineer at Buffalo harbor was sort of rushed through. I heard of a shipbuilding firm remarking that the time given to get the estimates made up was entirely too short, and that their bid had been thrown out as informal chiefly on this account. In asking for bids on construction and awarding contracts, the same as in anything else, it should be done decently and in order, and every chance given for the most open competition from all quarters.

The many shipmates, friends and associates of Mr. Warren G. Tilton, this season chief engineer of the steamer Aragon, owned by C. R. Jones & Co., will be sorry to learn that he has lost his better half, the funeral taking place on Friday last. Mr. Tilton sailed for several years in the employ of the Lake Superior Iron Co., and during the close of navigation worked as machinist in the shops of the Globe Iron Works Co. and the Cleveland Ship Building Co. On leaving the Aragon at Chicago a few weeks ago to attend to his sick wife there was good hopes of her final recovery, but she passed away, leaving two children, a boy and girl each aged 12 years. Mr. Tilton is well thought of by his employers and is generally well liked by his associates in the engineering and machinists' trades.

The regular meeting of the Civil Engineers' Club was held December 14. A committee of three was appointed by the chair to prepare suitable resolutions upon the death of the late secretary of the club, Mr. Forrest A. Coburn. Mr. Lehman B. Hoyt was elected an active member. Mr. John P. Johnston read a paper on "Boilers." He compared various types of boilers as adapted to different purposes, treated of boiler specifications, of the use and abuse of boilers in practice, and of their possibilities in the future. An animated discussion ensued, after which the club adjourned. At the next meeting on December 28, a paper will be read by Mr. Richard L. Newman, entitled, "Construction of Ships for Service on the Great Lakes."

The steamer City of Naples, of the Gilchrist fleet, sailed from this port on Monday, with about 2,700 tons of coal for Gladstone, Mich. She will be the last boat to go to Lake Michigan this season from a lower lake port. All the light-ships that mark the dangerous spots in the Detroit river have been taken in, and Capt. George Bell, master of the Naples, delayed the start from here so as to make the river about daylight. The steamers J. C. Gilchrist and A. P. Wright, of the same fleet, sailed from Ashtabula Saturday night. The boats were all chartered last week, and they got 60 cents. The cargoes are insured by the owner of the vessels and he also assumes the risk on hulls and freight.

BUFFALO.

Special Correspondence to The Marine Record.

The steamers George Stone and Maurice B. Grover were due here on Wednesday night.

The dry docks have been and are quite busy at this port with considerable work booked well ahead.

The steamers Robert Mills, America and Centurion arrived at this port Tuesday. They all had grain from Lake Michigan ports.

The steamer Helena is under charter at Chicago for corn on winter storage and spring delivery contracts. Rate 2 3/4 cents.

The Erie canal boatmen are asking for wider locks that will enable them to build boats twenty feet beam and 120 feet long. They have always objected to the lengthening of the boats very much without a chance of widening them also. They say that with a nine-foot canal, enabling them to run boats drawing eight feet, they could then run tows that would carry 100,000 bushels of grain

and they believe that the railroads would not be able to compete with them much less underbid the going rate.

There were three bids on the new steamer to be built here for harbor use by the government. All were opened on Thursday by Major Symons, Corps of Engineers, U. S. A. The Union Dry Dock Co. and David Bell bid \$12,900 each, and the Craig Ship Building Co., of Toledo, \$11,970. The boat is to be 70 feet over all, 15 feet beam, and 8 feet deep. The engines are to be compound condensing; cylinders, 12 and 22-inch by 16-inch stroke with a water-tube boiler. The hull will be of steel. No award has been made yet, though the contract will no doubt go to Toledo.

Two of the crew of the whaleback barge 133, were found suffocated in their bunks on Friday last. It is supposed that the men were suffocated through the escape of coal gas. This is an easy way to shuffle off the mortal coil and not too sensational either. The report was spread that the men had been drugged and robbed, but not much credence is given to the story.

It would surprise no one to hear of the Northern line placing a contract for one or two 400-foot steamers, pending the sale or loss of any of the present fleet. A casualty that would take one or more boats off the line would mean chartering outside tonnage and the manager here of the Northern line is well aware of the fact that if it pays an owner to charter it would easily pay his line to build. The two to three thousand-ton boats that were considered large a few years ago are in the shade relative to the carrying capacity of boats double their size. Mr. J. J. Hill is sure to be in for large new tonnage sooner or later and some vesselmen think it will be sooner.

FLOTSAM JETSAM AND LAGAN.

The steamer Raleigh left Toledo for Milwaukee Tuesday with a cargo of coal.

The wooden Clevelandbuilt steamer Neosho has a record for the season of 20 round trips between Milwaukee and Lake Erie ports.

A steel barge line from St. Louis to New Orleans is now assured, and a lower rate on export grain is expected as soon as the boats are running.

The Toledo branch of the Shipmasters' Association will meet in their rooms on Jefferson street on Wednesday afternoon. The election of this organization will be held on the last meeting in December and a ball will be given in January.

Nearly 500 men are employed at the Davidson shipyard, W. Bay City, and work is being rushed on the four big wooden boats. The two steamers will probably be finished before the schooners, but all will be ready to launch by the earliest opening of navigation. A large amount of repair work is also being done.

Capt. N. Clifford who is now captain of the schooner Ahira Cobb, but who formerly sailed the schooner E. R. Williams out of Toledo, is undoubtedly the oldest captain on the chain of lakes. He has been a mariner for more than 50 years. He is now 75 years of age and still hale and capable of carrying out his duties.

The foundered steamer Idaho lies in from eight to nine fathoms above Long Point, Lake Erie. There are six fathoms over the hull and about three fathoms over the "arches." The upper works of the vessel had apparently been washed away, but the hog frames (arches) were intact. A buoy was placed over the wreck, but it can not be expected to withstand the winter's ice.

It is expected that the new machine shop at the works of the American Steel Barge Co., West Superior, Wis., will be completed about January 1. The shop is now roofed, and a Westinghouse generator of 150 k. w., as well as an engine and several motors are on the ground. Work is now well under way on both the steamer and tow barge that are to be built during the winter.

Henry L. Glaser, assistant keeper of the light station on Poverty Island, Green Bay, has received official notice that the station will be kept open all winter and also received instructions ordering him to report there for duty, leaving Escanaba not later than the 26th inst. The light is required as a guide for the Ann Arbor car ferry steamers, which will ply regularly between Frankfort and Manistique, Mich., during the winter months.

There are many complaints about the removal of light-ships and buoys from dangerous reefs and shoals when so many boats are navigating the lakes late in the season. The loss incurred in the case of the steamer Iosco, which went on Gray's Reef last week because the captain was depending upon the light-ship to sound an alarm would pay for the total loss of a light-ship, but there would have been no occasion for her to part even a rope yarn if she had been kept on her station a week later.

After releasing the steamer Rosedale from East Charity shoals last Thursday, the wreckers had to beach her at Cape Vincent to prevent her sinking in deep water, with a valuable wrecking plant aboard. The steamer had seven steam pumps on board to keep her afloat. After being beached she remained until daylight, when after some hours' work she was again taken in tow and landed at Kingston. The it impossible to use her machinery and rudder. The Rosedale's back is not broken as was at first wreckers were compelled to tow the steamer stern first, as she was all by the head, and the stern in the air, rendering supposed. All the breaks seem to be in her bottom and well forward. The extent of damage cannot be ascertained until the survey is held. It was thought at one time that the vessel would prove a total loss, but brisk and successful work by the Donnelly Wrecking Co. on a contract price of \$17,000 saved the valuable steamer.

LAUNCH OF THE ONONDAGO.

The U. S. revenue cutter Onondago was successfully launched from the yards of the Globe Iron Works Co., Cleveland, at 2:30 Thursday afternoon, and was christened with the usual ceremony by Miss Lois Augusta Allen, daughter of Mr. Luther Allen, Secretary and Treasurer of the Globe Iron Works Co.

The Onondago, a single screw propeller, is 205 feet 6 inches in length over all, 188 feet between perpendiculars, 32 feet breadth of beam molded, and 17 feet depth of hold. From the present equipment she will carry only one gun. However, provisions are made for the addition of more effective armament.

Capt. John W. Collins, engineer in chief of the revenue cutter service, and Capt. Russell Glover, superintendent of construction witnessed the launch.

The new cutter will have triple-expansion engines, cylinders 25, 37 1/2 and 56 1/2 inches in diameter, and a stroke of 30 inches. Steam will be supplied by four single ended boilers of the Scotch type, each 11 feet 6 inches long. Each boiler will have two corrugated furnaces, and the total grate surface will be 185 square feet. The total heating surface will be 5,300 square feet. The propeller is of bronze, with 13 feet pitch. The vessel will be supplied with steam steering gear, steam windlass and capstans. She will have an electric light plant and a powerful searchlight.

The Onondago will make a trial trip before she is turned over to the officers of the revenue cutter service, and she will no doubt make equally as good time, and be found as efficient in every way as her sister ship launched two weeks ago.

OFFICERS ELECTED.

The annual meeting of Toledo harbor of the Masters and Pilots' Association was held Tuesday night. Capt. Alex. A. Stevenson, of the United States engineer's steamer Swansea, was elected worthy captain of the harbor. He succeeds Capt. Al Fitts, of the Pastime, who has done much toward building up the local branch.

The other officers elected are: First pilot, Richard M. Quick; second pilot, Homer Durand; clerk and purser, Geo. E. Hardy. The latter was re-elected, his good work in the office being thus appreciated. Seven other officers are to be appointed by the worthy captain.

WINTER NAVIGATION ON LAKE MICHIGAN.

According to instructions issued by F. A. Butterworth, commercial agent of the Chicago & West Michigan road, and Detroit, Grand Rapids and Western road, the new across the lake line will commence operations on December 27. The car ferry Shenango No. 2, will make round trips every 24 hours, weather permitting, between Milwaukee and Muskegon, Mich., at which latter point it will connect with the Chicago & West Michigan, and through it with the Detroit, Grand Rapids & Western road. The new line connects with the Chicago, Milwaukee & St. Paul system on this side of the lake.

An item of interest in this connection is the fact that the ferry will carry freight in less than carload lots. The operation of the boat under the new plan means that Milwaukee shippers will probably get more favorable rates on all shipments, large and small, to or from the East.

CANADIAN NOTICES TO MARINERS.

LAKE SUPERIOR.

CANADA.—Hand fog horns have been supplied to the keepers at the following stations on the northern shore of Lake Superior: Victoria Island, near the western end of the island; Lamb Island, on the southeast end at western side of entrance to west channel of Nipigon Bay, and Corbay Point, at north side of entrance to Batchewana Bay.

LAKE HURON.

NORTH CHANNEL.—Hand fog horns have been supplied to the keepers of light-stations on the west of Narrow Island and the north point of Clapperton Island, North Channel, Lake Huron.

GEORGIAN BAY.—Hand fog horns have been supplied to the keepers at the following light stations in Georgian Bay: Presqu'Isle, near McKenzie's wharf on western shore of Owen Sound; Meaford pierhead, western shore of Nottawasaga Bay; Nottawasaga Island, northern point; Christian Island, on Bar Point; Gin Island, westernmost one off the center of Bausoleil Island; Red Rock, at entrance to Parry Sound; Gereaux Island, on south side of entrance to Byng inlet; Bustard rocks (Back range), on a rocky islet southwest of entrance to French river; Lonely Island, on summit of north bluff; Killarney East or Rock Point, one mile east of Killarney village; and Strawberry Island on northernmost point.

LAKE ERIE.

CANADA.—A hand fog horn has been supplied to the keeper of the light station at Light-house Point, northeast extremity of Point Pelee Island, Lake Erie.

LAKE ONTARIO.

CANADA.—Hand fog horns have been supplied to the light keepers at Salmon, or Wicked, point, on the southern shore of Prince Edward Island, and at Scotch Bonnet, or Egg Island, south of the western point of Nicholson Island, Lake Ontario. In all of the foregoing and inclusive for each lake, the horns at these stations will be used only in answer to signals heard by the light keepers in thick weather.

The Leyland Steamship line has recently contracted to carry 1,500,000 bushels of grain from Boston to Liverpool at seven cents a bushel.

MARITIME LAW.

CHRYSAL, et al. v. FLINT.

District Court, S. D., New York. Sept. 9, 1897.

GENERAL AVERAGE—NEGLIGENT STRANDING—HARTER ACT.

(CONCLUDED.)

It is urged that the Harter act makes no allusion to general average, and was not designed to disturb the law on that subject. This might have been urged more plausibly as to the effect and intent of the negligence provisions in bills of lading. Several of the above adjudications as to the effect on general average of such clauses in bills of lading, were made long before the passage of the Harter act; and the history of that act shows that it was a part of its general intent to secure to shipowners under our law, and within the limits prescribed by our act, the benefits enjoyed by shipowners under such bill-of-lading exemptions by the foreign law. One of the benefits to the shipowner by the foreign law under such exemptions, as already adjudged when the Harter act was passed, was the right to a general average contribution; and the inference, if any, as to the actual intent of our act would be that it was designed to embrace that incidental consequence; at least, the contrary cannot be affirmed.

Quite aside, however, from the above adjudications, and from the question of any definite intent by Congress to modify the law of general average, the ordinary rules of construction require that the exemption which the act is evidently designed to afford to the shipowner from his previous responsibility to the cargo owner, should be given its full natural scope and effect, without abridgment by any arbitrary or narrow construction that is not warranted by anything apparent in the context, or from the evident object of the statute. "The whole object of the act," says Mr. Justice Brown in *The Delaware*, 161, U. S. 459, 16 Sup. Ct. 516, "is to modify the relation previously existing between the vessel and her cargo," and to fix that relation, that is, a relation of nonresponsibility for damages or losses arising out of bad navigation. Such a statutory change in a broad principle of law must carry with it other changes as its necessary accompaniment. In abolishing the previous responsibility of the ship and owner, the intent of the statute must be presumed to be to abolish also whatever is immediately dependent upon that responsibility. In no other way can the statute have its fair and natural effect.

The application of this new relation of non-responsibility under the Harter act to cases of general average, does not, in fact, make the least change in the principles of general average contribution. The rule remains as before, that he by whose fault, actual or constructive, the ship and cargo have been brought into danger, cannot recover an average contribution for his expenses in extricating them. And so the counter rule remains as before, that the interest which, being without fault, makes sacrifices for the common rescue, is entitled to an average contribution from what is thereby saved. Prior to the Harter act, the shipowner, under our law, was constructively in fault for bad navigation, and hence fell within the former rule. The Harter act, by abolishing his constructive fault and freeing him from all responsibility, withdraws him from the former rule and entitles him to contribution under the latter.

In *Ralli v. Troop*, 37 Fed. 890, it was said that "to deny the owners the benefit of a general average contribution on the ground of negligence, would impose on them, in effect, a liability for the fire from which the statute exempts them (Rev. St. § 4282)." And so in the present case, to say that the shipowners shall bear at their own charge all the expenses voluntarily incurred by them in rescuing this ship and cargo from a common peril for which the statute says they shall not be responsible, and to give to the cargo owner all the benefits resulting to him from these expenses, without charge, by refusing to impose on him the ordinary contribution in general average always hitherto made to one not in fault, is, in effect, to make the shipowner responsible, *pro tanto*, for the peril and its consequences, contrary to the very letter and purpose of the statute; since the owner is often practically compelled to make these advances for the common safety though not legally responsible for the fate of the cargo.

It is, indeed, the owner's duty to relieve ship and cargo in every peril so far as in his power; but not to do this at his own charge, unless the peril arose through his actual or constructive fault. *The Portsmouth*, 9 Wall, 682, 687. If the law denied contribution to him for sacrifices made for the common good when he was not in fault, the result plainly would often be disastrous to cargo. Maritime policy and

necessity not only forbid any such rule, but ages ago they established the opposite rule; that compensation shall be made to those who, not standing in any relation of legal responsibility, make sacrifices for the common safety. The Harter act certainly was not designed to disturb that principle; and it requires that the owners in this case shall receive due contribution from the cargo.

2. Nor do I think, upon the proof, that any error was made in allowing contribution for the gross freight on the cargo jettisoned, without deduction for the slight expense which would have attended actual delivery.

The condition of the average bond upon which the action is brought is, that the losses and expenses shall be apportioned by the average adjusters, "in accordance with the established usages and laws in similar cases." The general rule requires the adjustment of average to be made according to the port of destination, or where the voyage is ended, which in this case was New York. The evidence shows clearly that the long-established usage here has been to allow the gross freight; and where the bond adopts the local usage, it controls, even if the general law were otherwise. *Stewart v. Steamship Co.*, L. R. 8 Q. B. 88.

But the general law of this country, and largely elsewhere, except in England, seems to be in accordance with the custom here. *Per Story, J.*, in *The Nathaniel Hooper*, 3 Sumn, 542, Fed. Cas. No. 10,032; *Insurance Co. v. Ashby*, 13 Pet. 331, 334; *The Ann D. Richardson*, Abb. Adm. 499, 507, Fed. Cas. No. 410; *Dix. Ins.* (2d Ed.) 148; *Gourl. Gen. Av.* 109, 112; 2 *Phil. Ins.* § § 1,301, 1,368; 1 *Valin*, pp. 654, 655; *Code Commer.* art. 304, 2 *Valroger*, Comm. p. 366; 3 *Desjardins Dr. Mar.* p. 682; *Ulrich Grosse Har.* p. 59; *Italian Code*, § 576; *Nuova Cod. per. Castagnola*, p. 435; (1896); 1 *Magen, Ins.* 289.

The same practice seems to have prevailed for a long period in England, but has been of late modified by the adjusters there. Some efforts have been made by protests, as appear from the evidence, to introduce here the recent English practice, but thus far with so little result as plainly not to amount to any change in the prevailing usage. If the amount of expense, though small, which the ship actually saves by not delivering the jettisoned cargo, could, as a rule, be accurately ascertained at a comparatively small cost, I see no good reason why the existing custom should not equitably be modified, and the deduction allowed. But under the usage so long and widely prevailing, I do not feel authorized to hold that the adjustment in this case is incorrectly made up. Most of the ship's expenses remain the same, whether a part of the cargo is jettisoned or not; such as for wages, provisions, insurance, wear and tear, pilotage, towage, wharfage, etc.; only the mere handling of the cargo seems to remain, and that was done formerly, and is to some extent still done, by the crew, so that the handling of the jettisoned cargo would have caused little, if any, additional expense to the ship. If stevedores are employed to unload the ship, as is now becoming general, the saving of the cost of handling the jettisoned cargo is probably easily ascertainable; and when that becomes the established method of business, the usage of adjusters in the allowance of freight, it would seem ought to be, and probably will be, modified accordingly.

Decree for the libelants for the two items claimed, with costs.

STURGEON BAY SHIP CANAL TRAFFIC.

Capt. Geo. A. Zinn, of the Engineer Corps, U. S. A., Milwaukee, has made up the following comparative statement of vessels and net tonnage passing through the Sturgeon Bay canal from July to November inclusive, 1896 and 1897:

Months.	1897.		1896.	
	No. of Ves.	Net ton.	No. of Ves.	Net ton.
July.....	554	214,976	552	215,115
August.....	703	235,130	487	169,607
September.....	717	244,754	470	167,091
October.....	581	204,116	567	210,273
November.....	405	165,892	531	219,421
Total.....	2,960	1,064,868	2,607	981,507

Increase in number of vessels.....353
Increase in net tonnage.....83,361

The sum of \$78,104.05 was expended in the operating and care of St. Mary's Falls canal during the last fiscal year. The expenditure for the present fiscal year will probably exceed that of last by a considerable amount.

NOTES.

THE German Naval Program certainly does not err on the side of modesty. The German emperor evidently believes in doing a thing well, but fifty-five and a half millions sterling is a pretty heavy contribution to ask for to be extended over eight years. This amount is for 17 battleships, 8 coast defence ships, 9 large, and 26 smaller cruisers, with a reserve of two battleships and 7 cruisers, and the necessary new docks requisite to protect German interests abroad.

THE report of the Canadian commissioners appointed to act jointly with the United States commissioners, to inquire into the feasibility of an international deep waterway between the Great Lakes and the Atlantic Ocean, has been printed, and is ready for distribution. It is a blue book of some 70 pages, and deals at length with the whole subject. It favors a route by the St. Lawrence river to Lake Champlain and the Hudson river. This is the least expensive and most practical route yet suggested.

THE actual cost of the army during the past year was \$31,110,532.59; that of the navy, \$34,234,376. These figures are given by the Secretary of the Treasury in a report to Congress. Included in the estimate of the cost of the military establishment are expenses connected with the construction of fortifications, and their armament which are properly classed in the fortifications act. The estimate in connection with the cost of the navy also contains items which shall not perhaps be placed to the credit of the navy.

THE St. Lawrence river route seems to be growing in favor with grain exporters, as the season just closed has been the best that Montreal has had. The total quantity of wheat, corn, peas, oats, barley and rye shipped in 1895 was, roundly, 7,000,000 bushels; in 1896 it jumped to 19,000,000, and this year there has been another bound to 27,000,000 bushels. Of this 8,000,000 of increase, more, by the way, than the total export of 1895, wheat claims 2,847,340 bushels, corn 2,605,526 bushels, and oats 2,386,370 bushels.

THE Canadian wheat, which goes to Buffalo because the Buffalo route is the cheapest, is handled, as follows, in a peculiar way. It is bonded immediately on arrival, and a United States customs inspector must be present when the seals on the hatches are broken. It remains in his charge in the elevator until loaded into cars or canal boats, and is properly sealed up with government seals. The extra expense of the inspector's salaries is assumed by the Buffalo elevator men, who found several years ago that this business was worth encouraging and decided to make it as easy as possible for Canadian wheat to take this route. From the opening of navigation to November 1 nearly 6,000,000 bushels of Canadian wheat were received at Buffalo.

THERE is much activity at the Cramp shipyard just now, with preparations for a launching and for the early departure of two recently built vessels. The Japanese cruiser *Kasagi* is to be launched before the close of the year; the new passenger steamship *Miami* will be turned over to the Florida East Coast Co. before 1898, and work is now being pushed upon the yacht *Dorothea*, to be built for Thomas McKean. Less than a year ago the Cramps contracted with the Japanese government for a cruiser of a type radically different in build and armament from anything in the American navy. Construction of the vessel was rapid, and to-day she is perhaps the first modern warship ever built in the United States for a foreign power. The *Miami*, which was launched on October 23, was brought back to the Cramps' yard after her builders' trial trip. But 15 knots were required by the contract, but she made over 17 knots, and proved herself in every way a first-class vessel.

MESSRS. HARLAND & WOLF, Belfast, Ireland, who carried off the British shipbuilders' blue ribbon for the largest tonnage launched by any one firm last year, appear likely to also hold the premium position for 1897. The year's work shows ten vessels, aggregating 82,738 tons, which the firm have put into the water, and in addition they have increased the tonnage of the *Auguste Victoria* by 1,502 tons, making in all 84,240 tons of shipping as their contribution to the year's output. Of the new vessels three are over 10,000 tons, viz.: the *Cymric* 12,340, the *Brasillia* 11,100, and the *Briton* 10,248 tons. These three vessels are all steel—the firm have built no iron ships—twin-screw steamers, the *Briton* with triple-expansion engines of 10,000 h. p., and the *Cymric* and *Brasillia* with quadruples of 6,700 and 3,800 h. p. respectively, the total engine power of the ten vessels, all triples, with the exception of the two named, running out at the high figure of 45,850 h. p. or well over ½ h. p. per gross ton. Eight of the Queen's Island vessels were twin screws.

TRADES UNIONISM VERSUS SHIP WORK.

The engineering trade dispute, strike, lockout or whatever it may be termed, is giving the men and employers a severe whirl in England, or perhaps chiefly Scotland, at this time.

London Fairplay is apparently a firm advocate of employers' rights and never fails to hold up their end of the controversy on all occasions. As an instance of how the unions act on the other side of the water the following experience is quoted in that journal:

A steamer had been fitted with a steam-steering engine which was geared, by means of a spur-wheel and pinion, to the after screw gear. In laying down the engine it had not been put fair in line with the after screw, and on the arrival of the steamer at a certain dock in this country it was discovered that the corner was broken off two of the teeth of the spur-wheel. The owners' overlooker therefore sent ashore for two engine fitters to drill two holes and put in a couple of inch pins and line up the engine. When these men came off they brought an apprentice with them and had a boat in attendance, as the steamer was lying in the middle of the dock. When the fitters had got the holes bored and were waiting for the smith who had prepared the pins, it was suggested to the engineer that they would slacken the holding-down bolts of the engine and wedge up in line with the after gear. About an hour afterwards the men went to the overlooker and told him that as this was a carpenters' job carpenters must be got to slacken the bolts. On being asked why they could not slacken the bolts, as they could get tools on board, they replied: "This is a carpenters' job, and the union won't allow us to slacken bolts which pass through a wooden deck."

A carpenter had to be sent for, and he and his mate came on board, and a man was in attendance in a boat. The following morning the carpenter went to the overlooker and said that as the under side of the deck was lined with $\frac{5}{8}$ -inch tongued and grooved lining a joiner would be necessary to take it down so that the heads of the bolts could be got at. "Oh, take it down yourselves," the overlooker said. "No, sir," was the reply, "it is a ship joiners' job, and we dare not touch it." A ship joiner was then sent for; he took down the lining, when it was found that one or two of the bolts were not bearing fair on account of rivet heads, and a stringer landing coming in the way. One of the engineers was then asked to get a hammer and chisel and cut the rivet heads which were foul of the bolts. "No, sir," he replied, "this is a boilermaker's work and I cannot touch it." A boilermaker and his mate (a holder-on) and a rivet boy had to be sent for, and the difficulties of this very simple job were at length overcome. The delay entailed by having to call in different classes of tradesmen caused the repairs to extend to a period of five days, with overtime, when three days of a couple of apprentices [would have sufficed for the completion of the whole job. That time and the small quantity of material and use of tools required for the work would not have cost more than £7 10s.; as it was, the amount of the account was £38 odd (\$190). Comment on the unionist vagaries displayed over this small repairing job is surely unnecessary.

THE MARQUETTE BREAKWATER.

Capt. Abbott, Corps of Engineers, U. S. A., in charge of the work in the Minneapolis district, recently examined the concrete breakwater at Marquette, Mich., and was greatly pleased with it. "It is a splendid piece of work," he is quoted as saying. "It is subjected to unusual conditions. For instance, it may be encrusted with several feet of ice when along comes a storm and peels every bit of ice off as clean as if it were melted. Then in a day or so it will be all frozen up again. The pounding of the waves and masses of ice is tremendous. But the breakwater is standing as solidly as if it were made of granite. There is not a sign of roughness, no chips cut out; every angle is as clean as if newly cut from solid rock. It shows what I wanted to find out; whether concrete work is to be a success in this climate."

ANOTHER SHIPBUILDING CONTRACT.

The Detroit Dry Dock Co. closed a contract on Saturday for a syndicate of Puget Sound business men to build for service on that body of water a steel propeller, to be 165 feet over all, 154 feet keel, 27 feet beam, and 13 feet deep. Her engines will be triple expansion engine of 1,000 H. P., steam to be furnished by two boilers tested for 165 pounds, with Howden hot draft. She will carry 1,000 passengers and 250 tons of cargo and steam sixteen miles an hour. Her

draft light will be $8\frac{1}{2}$ feet, loaded to feet. Her cost will be about \$75,000.

The syndicate was represented in the contract by Eugene L. McAllister, formerly chief draughtsman of the Dry Dock Co., and now of Seattle. The steamer is to be confined to the Sound, trading between Whatcom, Tacoma and Seattle. She will be built up in the Wyandotte yard, every plate and frame being numbered, then will be taken to pieces and shipped by rail to destination, where she will again be put together and placed on the route as early as possible. There is an excellent trade for a steamer like the above in the Puget Sound trade and it is generally admitted that her owners are level headed men and will make lots of money out of her.

A LARGE CARGO.

The Corrigan line towbarge Aurania cleared from Toledo, O., on Monday with 200,000 bushels of corn for Fairport, O. This is the last part of a shipment of 450,000 bushels sold for export, via Fairport, and makes a total of 1,880,000 bushels of corn handled for the past two and a half months, all for export. This corn comes from over a vast extent of territory, the trade reaching out into the heart of the great corn-producing sections of the west.

VESSELS CLASSED.

The American Shipmaster's Association, New York, has classed or rated this week in the "Record of American and Foreign Shipping," the following vessels: Three masted schooners, Mary A. Hall and Sarah A. Fuller. Screw steamers, Miami, New England and Vigilancia, and the British half-brig, J. C. Hamlin, Jr.

TRAFFIC THROUGH ST. MARY'S FALLS CANAL.

Report of freight and passenger traffic to and from Lake Superior for the month of December, 1897, including statistics of the United States and Canadian canals at Sault Ste. Marie, Mich., and Ontario.

EAST BOUND.				
ITEMS.	DESIGNATION.	U. S. Canal.	Canadian Canal.	Total.
Copper.....	Net Tons	3,654	.....	3,654
Grain.....	Bushels	944,574	513,550	1,458,124
Building Stone..	Net Tons	.....	.....	.....
Flour.....	Barrels	354,506	.....	354,506
Iron Ore.....	Net Tons	56,994	6,756	63,750
Iron, Pig.....	Net Tons	.....	.....	.....
Lumber.....	M. Ft. B. M.	5,723	.....	5,723
Silver Ore.....	Net Tons	.....	.....	.....
Wheat.....	Bushels	4,195,958	1,880,475	6,076,433
Unclassed Freight..	Net Tons	1,883	438	2,321
Passengers.....	Number	4	.....	4

WEST BOUND.				
ITEMS.	DESIGNATION.	U. S. Canal.	Canadian Canal.	Total.
Coal (Hard).....	Net Tons	5,016	.....	5,016
Coal (Soft).....	Net Tons	77,490	14,950	92,440
Flour.....	Barrels	.....	.....	.....
Grain.....	Bushels	.....	.....	.....
Manufactured Iron..	Net Tons	1,020	.....	1,020
Salt.....	Barrels	.....	.....	.....
Unclassed Freight..	Net Tons	412	.....	412
Passengers.....	Number	.....	.....	.....

East Bound Freight, net tons	334,071
West Bound Freight, net tons	98,888
Total	432,959
Craft—United States.....	207
Canadian.....	102
Total	309
Registered Tonnage—United States.....	224,204
Canadian.....	56,615
Total	280,819

An order has been issued at Washington by the Secretary of the Navy to have the Hydrographic Office provided for in the sundry civil bill for Duluth, established at once. A naval officer will be detailed soon to take charge. The question of a location will also have to be decided. In most places, if not all, the hydrographic service expects free rental.

OBITUARY.

(CAPT. DONAHUE.)

Capt. Patrick Donahue, one of the oldest and most respected lake captains of Cleveland, died Saturday morning at his late residence, No. 48 Twenty-third avenue. The cause of death was paralysis. He leaves a wife and five children, two daughters and three sons. He was born in Canada in the year 1825, and was, therefore, 72 years old.

Fifty-nine years ago, at the age of 13 years, Capt. Donahue commenced sailing on the lakes, and he continued to be a sea-faring man until five years ago, when he was compelled to retire, through a number of misfortunes. The type of vessels on which he first sailed is not seen on the lakes these days. The first vessel Capt. Donahue mastered was the brig Concord. The next the schooner William, then the Wat. Sherman and the brig Treat. In 1860 he commanded the schooner Valiera, and made a trip to Europe in the famous bark. His next vessel was the schooner Correspondent, and then the Robison. He obtained an interest in the schooner Grant, and later succeeded in owning the schooner Lucky. The schooners Charles Wall and Richard Winslow were commanded by Capt. Donahue, and after that he took charge of the schooner Pelican, which proved to be his last boat.

Five years ago Capt. Donahue started from Two Harbors, a port on Lake Superior, with a cargo of ore from Cleveland. A gale was encountered and the schooner was disabled. She ran into shelter under the lee of Caribou Island. For a week nearly everybody gave the vessel up as lost. She was discovered by chance, and wrecking tugs towed the disabled vessel to Cleveland. This experience told heavily on the old captain, and from that time his health began to fail. He was forced to retire from active life. Eleven weeks also he suffered a stroke of paralysis, and from that time his death had been expected. The following children survive: Mrs. W. H. Fenney, Miss Daisy Donahue, Capt. Charles Donahue, Edward and John Donahue.

(CAPT. HOLDRIDGE.)

Capt. Wilbur Holdridge, late of the Bessemer Steamship Co.'s barge Alfred Krupp, has joined the vast majority. When the boat went into winter quarters on Nov. 13, Capt. Holdridge was suffering from severe neuralgic pains of the chest and heart and a physician was called to attend him. After a few days he was able to be about and attend to putting the boat into shape for the winter, after which he left for his home at Black Rock, N. Y. Capt. Holdridge was known as one of the most successful men on the lakes in handling large steel barges. He had the distinction of sailing the first whaleback barge ever built, the 101. He took the 101 when it was freely prophesied that she would go under in the first big storm. He was well thought of by his employers and generally well liked by all with whom he came in contact.

EASTERN FREIGHT REPORT.

According to the weekly freight report furnished the RECORD by Messrs. Funch, Edye & Co. New York:

The very much reduced list of fixtures tells a tale of the usual dullness (although perhaps slightly accentuated this year) which pervades our market before the turn of the month. Unlike the same time last year, there is no indication of any "shorts" being still unprovided with tonnage, and owners with vessels close to hand, and withheld from the market hitherto in the hope of striking such "shorts," will, we fear, be doomed to disappointment. We find no inquiry for this month at the nominal rate of 3s. 9d., whilst for January a few handy boats might still be placed to Cork f. o. at 3s. 6d. from range of ports. Large boats may be fixed for that month at 3s., with proportion of oats at 3d. @ $4\frac{1}{2}$ d. less for picked ports, privilege of French ports or Hamburg at $1\frac{1}{2}$ d. more—but this at the moment is top. Unfortunately the cotton ports afford little relief to boats heading this way unchartered, as the tendency both at the Gulf and the Atlantic cotton ports is towards a lower basis of freights. Some relief may be looked for in this emergency from timber fixtures from the South, charterers thence showing a disposition to commence operations as soon as a slightly lower range of freights, now likely to be reached ere very long, enables them to do so.

Our market for sail tonnage continues in about the same condition as last week. Vessels for case oil to the far East and for general cargo to the Colonies, for future loading, are in fair demand at rates fully up to former figures, with some tendency towards an advance, while other lines are quiet and without any appreciable change.



ESTABLISHED 1878.

Published Every Thursday by

THE MARINE RECORD PUBLISHING CO.,

Incorporated.

GEO. L. SMITH, President.

C. E. RUSKIN,	-	-	-	Manager.
CAPT. JOHN SWAINSON,	-	-	-	Editor.
THOS. WILLIAMS, Chicago,	-	-	-	Associate.
CLEVELAND,			CHICAGO.	
Western Reserve Building.			Royal Insurance Building.	

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All communications should be addressed to the Cleveland office.

THE MARINE RECORD PUBLISHING CO.,

Western Reserve Building, Cleveland, O.

Entered at Cleveland Postoffice as second-class mail matter.

CLEVELAND, O., DECEMBER 23, 1897.

It is understood that the Bering Sea Commission, which has been holding daily sessions in the city of Boston, has approved the claims against the United States amounting to \$1,000,000. The amount awarded to Great Britain will be paid within six months of the time when the final decision is reached.

THE thanks of the RECORD are due to the lake shipbuilders for the prompt manner in which they have forwarded to this office the detailed particulars of all tonnage now under construction at lake shipyards. As it is likely that one or more contracts for new tonnage will yet be placed before the close of the year the lists will be considered complete when published in the issue of the RECORD, December 30th.

AFTER six years of discussion and deliberation the revised international rules to prevent collisions at sea the most important work of the Washington International Marine Conference, have been put in force and operation by the maritime nations. The rules to prevent collisions on our tide-water harbors, rivers and lakes have been closely assimilated to the universal rules.

THE U. S. Marine Hospital Service has entered upon the centennial year of its existence, having been established in 1798. During the fiscal year ended June 30, the total number of patients treated at the hospitals and dispensaries of the service was 54,477, professional aid being also given to the Life-Saving Service, Steamboat Inspection Service, Revenue Cutter Service, and the Immigration Service, at a total annual expenditure of \$538,357.

THE thanks of the RECORD are due to the Hon. E. C. Chamberlain, Commissioner of Navigation, Treasury Department, Bureau of Navigation, Washington, D. C., for a copy of the "blue book" for 1897, containing a list of merchant vessels and departmental as well as the naval vessels of the United States. We are much pleased to see that the present commissioner has done away with the picture part of this work and instead of devoting several pages to illustrated advertisements for certain lines of steamers, has kept strictly to the point of disseminating the requisite departmental information for which the volume is published. In this connection we can but say that if through the exigencies of politics it is found necessary to supersede the present Commissioner of Navigation it will require the utmost care, discretion and circumspection for the present administration to find his equal in the official capacity which he has so ably and satisfactorily filled during the past term, it is generally admitted that he is the right man in the right place, and a better official now than at the beginning of his term of office.

STEERING AND SAILING RULES

It is a disgraceful state of affairs when private interests are compelled to insist upon government officers being found capable of administering their simple and ordinary duties. Such, however, was the case a few days ago when a delegation appeared before the Secretary of the Treasury in the presence of the chief of the steamboat inspection service and made direct charges regarding the conduct and general efficiency of the steamboat rules and regulations as in the past and at present conducted. One of the clauses contained in a later petition to the Secretary of the Treasury signed by a number of prominent steamboat owners and endorsed by the counsel for the Lake Carriers' Association asks "that supervising and local inspectors of steamers in various districts of the Great Lakes shall be familiar with all laws governing on such waters." Is it possible that these officers are not conversant with the laws governing on such waters? Another, and the third clause reads: "That the rules and regulations for the prevention of collisions be brought to the attention of, and be fully understood by, all officers of steam vessels licensed by the government." Again, is it within the comprehension of owners, masters' pilots, underwriters, or government officials that the existing laws, rules and regulations are not understood by licensed officers? Well! Well! Well! Where is this steamboat inspection service, supervision and licensing power drifting to anyway?

The Supervising Inspector General, in discussing the petition, said he did not see why the pilot rules published by his office were not perfectly plain and intelligible to any man of average intelligence and familiarity with handling boats. He said that these rules were compiled under the direction and with the advice of the vessel owners of the lakes, and that they were therefore to blame for any fault that might be found with them. He said that he would refer the petition to the Board of Supervising Inspectors next month. What action they would take he could not predict.

Now, let us hesitate awhile to remind the chief of the steamboat inspection service that the new lake rules, or what is known as the White bill, framed in Cleveland, presented in Congress and chased through committee hearings under the auspices of a Cleveland congressman until the signature of the President was attached, is nothing more than the universal and international "Rules of the Road" as observed on the coast and oceans for nearly the past half century. Such is the embodiment or the salient points contained in the so-called new "steering and sailing rules" with the addition of one or two clauses relating to local pilotage so as to facilitate navigation between Montreal and Duluth.

While some pilots may beguile themselves, and perhaps others, with the idea that the new rules are original, framed, endorsed and executed purely by lake talent, it may be stated advisedly that there is hardly a word altered in the ruling articles as observed and carried out according to the well-known international sailing and steering rules; however, the former lake rules were capsized, thrown overboard and the salt water rules adopted, while a majority labored under the delusion that the lake marine held a cinch on advanced methods of avoiding collisions and the safe conduct of vessels under all general conditions on the lakes. Therefore, the White bill, Capt. Mack's rules, the Goulder regulations, or the shipmaster's code and it, or they, have as much right to be called one as the other, each having an equal share in their promulgation, simmers down to the old international sailing and steering rules.

These rules were rushed through committee, chased along for the President to sign, and foisted upon the lake marine before a majority of the pilots could grasp their meaning, and in one season the whole system became changed, or in other words, men in charge of the deck sailed until the close of navigation under one set of so-called rules and on re-joining their vessels in the spring were expected to live up to an entirely different code, if they desired to get along in safety. Why, even the local inspectors themselves, the examining and the licensing power, could not be expected, without due instruction, to grasp the full measure of so radical a change from all that they had previously been accustomed to and in following which they had spent all of their practical and actual service afloat. This feature seems to come very prominently before us when the Secretary of the Treasury is petitioned by shipowners and high legal talent to take such steps as may determine that all inspectors realize the changes in the law, and this principally in the code of steering and sailing rules. How was it to be expected that the supervising and local inspectors could bring to the attention of all officers of steam vessels licensed by the government,

the full import of laws which they themselves but imperfectly understood, or realized in their inclusiveness, and dressed up to them in the garb of new and strange language.

Seldom is anything well done that is done in a hurry and this maxim applies more pertinently to legislative affairs than others. When it was found desirable to abolish the former rules of the Board of Supervising Inspectors and substitute therefor the universal sailing and steering rules, a competent committee ought to have been appointed by Congress to go carefully over each and every clause contained in the bill, and a proper period, say one or two seasons, allowed to elapse before the law went into force, and so that all men engaged in the practical handling of steamers as well as the officers of the steamboat inspection service might become conversant with the full intent and import of the new rules and the changes contained therein.

To quote another old truism, "It is never too late to mend," for even Paddy's musket was found to work all right after it had received a new lock, stock and barrel and something of the same sort of renewing is required in the department known as the U. S. Steamboat Inspection Service. The RECORD pointed out years ago and repeatedly since, that unless this branch of the Treasury Department instituted reforms, private citizens would be compelled to enact laws and regulations for the safe conduct of floating property, and now that our notice or warning has been fulfilled the chief of the service pleads the baby act and says that the new rules were compiled by lake vessel owners and that they alone are to blame for any fault found with them, or in other words, we, or I, gave what was asked and therefore I, as head and front of the department, had nothing whatever to do with the rules enacted into law by my acquiescence. I don't know anything about it but will refer the matter to my board when they meet once a year to unanimously endorse each other's actions.

The Supervising Inspector-General of the Steamboat Inspection Service, as also the honorable Board of Supervising Inspectors need have no qualms of conscience relative to the merits of the actual steering and sailing rules for the lakes, excellent talent has tried for decades to kick holes through them but they stand the test fairly well and are applicable under all conditions, or the qualifying rules make them so. The interview with and the petition to the Secretary of the Treasury was solely to secure a more general and personal knowledge of these anciently enacted new lake rules for steering and sailing. The men that grant licenses are called upon to familiarize themselves with the code and to see that the candidates for licenses are aware that the Hon. W. J. White was instrumental some time ago in getting a measure through Congress that changed the asinine illustrations and misleading wording of the rules formerly in use on the lakes. Many pilots don't or won't read anything concerning their business during the winter months and they are kept too busy in the summer to read, mark, learn and inwardly digest that which they ought to know, hence, the only place to bring them up with a round turn is when they go after their licenses, and this pre-supposes that the licensing officer which is the local inspector of steamboats has himself an expert knowledge of the strange code so hurriedly forced upon him.

Issuing circulars and pamphlets indiscriminately, tacking up licenses on a bulkhead, or keeping the ship's register rolled up in cotton and safely stowed away in the captain's shaving box, does not do one iota of good, sea lawyers to the contrary notwithstanding. The sore spot in the service, the ulcer that is draining away the technical efficiency of the lake marine as represented by the younger members of the fraternity, is the manner in which licenses are being dished out to incompetents, for, giving the servitude, and a plow boy could slip through the examination, simply because no qualifications are asked for or required, nor need the pupil excel the tutor in point of knowledge.

As we have said, the MARINE RECORD has dwelled forcibly and frequently on this subject in the past, recognizing that radical evils required a radical cure, and at this time we can but reiterate the words with which we re-open the subject at this time by again stating that it is a disgraceful state of affairs that compels business and private interests to ignore the entire personnel of the steamboat inspection service (whose national duty and reason of being is to see the laws are known and enforced) and carry their well-grounded complaints, petitions and appeals into the sancto sanctorum of the cabinet, thereby trusting to the discretion of the Secretary of the Treasury to immediately right their wrongs which sooner or later must be done in any case.

THAT Duluth will have a branch Hydrographic Office is now a foregone conclusion, as an order has been issued at Washington by the Secretary of the Navy to have the necessary appropriation for the equipment provided for in the sundry civil bill, which is a very excellent feature and goes to show that lake ports are now receiving at least a modicum of attention from the heads of departments at Washington. There is one phase of this question of branch hydrographic offices, however, which seems to be away off color, picayunish, derogatory to the prestige and best interests of the Navy Department, and entirely at variance with what is expected and should be the rule of an important branch of the national service. We refer to the miserably small practice of the Navy Department in expecting or requiring a suite of offices in one of, if not the best buildings in a city, to be donated by its owner or owners for the use of this valuable branch of a worthy institution or department. All, each and every other local national departmental office, and there are nearly a score of them, are in a position to furnish rental, heat, light, janitor services, etc., etc., when called upon, and in the same measure as the ordinary commercial public have to do, so that there is not the slightest cause or reason for branch hydrographic offices to be placed in such a false light as to go seeking for quarters rent free. We are not aware that any branch of the U. S. Navy poses as a whole, or in part, as a charitable institution and so as to plead for gratuitous favors found absolutely necessary to its well being, or rather existence. The Department of Agriculture, Weather Bureau, is in a position to command or demand the most eligible, convenient and commodious offices, and the question arises what is the matter with the more important branch of the national service known as the hydrographic work of the Bureau of Navigation, Navy Department. It is freely and fully acknowledged that branch hydrographic offices at lake ports are worth incalculably more to general commerce than their cost to the government. It can also be averred that their usefulness and value are annually increasing, furthermore, the additional safeguards to commerce furnished by branch hydrographic offices one year will become an absolute necessity in the future, so that it is simply ridiculous and as we have said, too utterly picayunish for the Navy Department to even accept, if tendered, gratuitous favors of this sort from private individuals engaged in a business venture solely for the returns therefrom.

THE twenty-first day of December finds four large vessels coal laden, bound from Ohio ports to Lake Michigan, and every light-ship as well as other aids to navigation removed. The closing of navigation has usually been at the discretion of the underwriters, when the state of the weather did not take a hand in it, but now it appears as if a department of our paternal government desired to exercise its authority in the matter of ordering vessels into winter quarters. Owners of the City of Naples, Appomatox, Gilchrist and Wright evidently don't propose to be brow-beat by those whom they help to support, as, notwithstanding the mandates of the U. S. Light-House Board, the naval secretary or district officers, they have men in their employ who can find their way over the lakes, although the national aids to navigation and commerce have all been snugly stowed away for the winter. Of course it would be beyond all reason for the naval officers in charge of the light-house districts, or for any of the employes or crews of the tenders and light-ships to be expected to have to blow their fingers for a day or two towards the close of the season, but the ordinary rope-haulers, and deck hands shipped on cargo steamers can take it like lambs, and that too for a mere pittance of wages earned. The Light-House Board should be better advised regarding the weather conditions existing each fall and not make such a continually repeated burlesque of the service.

THERE is every reason for a better understanding of the rules to be observed when steamers are meeting, crossing or overtaking each other. The collision case this week between the steamers Iowa and Petosky bound on opposite courses between Chicago and Milwaukee, while not serious from the standpoint of loss or injury to passengers, crews or vessels is still a very important matter when the right of way and the "rules of the road" are taken into consideration. In this case there seems to have been no possible cause or reason for the vessels coming together as they were well apart and sailing on parallel courses. The published account shows that the night was fairly clear and the lights of both steamers were sighted for some time previous to the collision. Without having the full facts of the case before us it would be useless to express any opinion regarding the

duties of those in charge of these valuable steamers, but one fact is evident, each steamer having the other on her own starboard side it devolved upon each to keep clear, and where the starboard light of one was opposed to the green light of the other there should have been no possibility of collision, to suggest such a result is not only a begging of the question but stamps it as a snide, freak supposition and a catch question. Even in the event of anything having happened to the steering gear in this case there was the alternative of slowing down, stopping or reversing the engines. Both masters will of course lodge affidavits with the local steamboat inspectors, from whose deliberations we may expect some direct, technical information showing the causes leading up to what appears to have been slovenly, careless and lubberly piloting on the part of some one.

It is gradually dawning upon the minds of many people connected with lake marine interests that while freight is billed on railroad cars, vessels carry cargo on bills of lading to earn freight. Hitherto it has been customary to call bulk cargoes, freight, in a sense that a vessel had loaded four thousand tons of iron ore freight, or coal freight, while the term for general cargo was and is package freight, which I suppose is all right in railroad parlance or nomenclature. A similar misnomer used to be the fashion a few years ago when steamers, driven by screw propellers were classed steam barges and propellers, the distinction, however, being quite unnecessary, for all were propelled by a screw. The only change required to define how a steamer is propelled these days is side-wheel, propeller and stern-wheel. By the bye we may have turbinias, squinters, stern-chasers, wingers, etc. in the future, but we have nicely got down to calling all steamers or vessels whose motive power is a screw, propellers or steamers, but not steamships, for we can have fore and aft, brig, bark, or shiprigged steamers and there is as much difference and distinction in the rig as there is in naming the propelling power, so that lake steamships is again a misnomer.

It was about time for the managers of the D. & C. line of passenger steamers to stop running the handsome valuable boats of that line when the wise-acres of the U. S. Light-House Board took away all the lights, buoys and aids to navigation. The manager of the line has perhaps had fighting enough on this subject in previous seasons, so the palpably misleading report was given out that the powerful and well-equipped boats were to be laid up for repairs, that excuse did not seem quite good enough and there it was said the boats were taken off the route on account of the continued bad weather. Is it not more likely that the underwriters, or the directors of the company, closed traffic on account of the extra risks to be run when lights and other aids to navigation had been taken away and stowed in winter quarters. Some vessels are compelled to come to at nights and sail only by daylight for this reason.

THE question of having a good powerful fog horn at Colchester Reef, Lake Erie, has been brought to the attention of Capt. George P. McKay, of the Lake Carriers' Association, and he suggests that a petition be signed by a number of masters and pilots to that effect and duly forwarded to the Minister of Marine and Fisheries at Ottawa, as Colchester is a Canadian light. There was, or perhaps is at present, a bell there but it is never heard, or if so, it is so indistinct as to be of little use as an aid to navigation. It goes without saying that there are very few Canadian vessels passing this light, or for that matter any other lake light, yet, at the same time the Dominion authorities are as a rule courteous enough to offer the best possible aids to the general commerce of the lakes, whether carried in American or Canadian bottoms, the free traffic through the Canadian "Soo" canal being evidence enough of this.

THE Supervising Inspector-General renews the following recommendation for legislation: That so much of section 4405, Revised Statutes, be repealed as confers upon the Board of Supervising Inspectors the full power of a legislative body; that the number of supervising inspectors be reduced from ten to five; that the position of assistant to the Supervising Inspector-General be created by law; that provision be made for the punishment of forgery in the altering of licences, and for perjury by persons applying for license; and that the Secretary of the Treasury be authorized to divide local inspection districts into two or more such districts, with a board of local inspectors in each, when, in his judgment, the work could thereby be more economically conducted than under the present method. The amount

saved this year as represented by a decrease in contingent expenses from previous years was \$11,064. The total expense for the service consisting of 175 officers, clerks and messengers, were as follows, Salaries, \$285,139; contingent expenses, \$56,404.

THERE has been so much publicity given to the formation of various state naval reserve divisions and later the sending of the ex-U. S. S. Yantic to Detroit as a drill ship for the Michigan reserves, that our Canadian brethren have taken the matter up and now propose to organize a corps of naval militia under the Dominion jurisdiction. At a meeting held in Toronto this week to consider the matter the motion was strongly supported and it was agreed that some such organization was highly advisable. As the result of a full discussion a committee was appointed to make arrangements to organize a corps to be styled the Toronto Naval Artillery.

REVENUE CUTTER SERVICE REPORT.

Capt. C. F. Shoemaker, chief of the revenue cutter service, in his annual report says of the 37 vessels in the service two years ago there were 19 old wooden hulls, 14 of iron, three of steel and one of iron, wooden sheathed. The vessels have boarded and examined 18,549 vessels of the merchant marine, and reported to proper authority for various violations of law 536 of them, incurring penalties in the sum of \$149,007. Eighty-eight vessels in actual distress with 623 persons on board, were assisted, the value of the vessels and cargoes amounting to \$1,217,213.

STEAMSHIP LIBELED.

A libel was filed in the United States District Court this week against the steamship Oakland, now lying in New York, for \$50,000. The libellant, Wm. B. Phelps, who, in March, 1896, was a passenger on board the Oakland from Bermuda, alleges that during a collision while the steamship was entering the harbor of St. George he had his skull and several of his ribs fractured, and that the accident was due to the negligence of the crew of the Oakland. The steamship has been attached by the United States marshals.

REWARD FOR INFORMATION OF A COLLISION.

Messrs. Wendt & Co., 4 and 6 Throgmorton avenue, London, E. C., are offering a reward of £10 for information leading to the identification of the steamer which about 1 a. m. on the morning of November 15 ran into the Norwegian three-masted schooner Aagot, in the Atlantic in lat. 50 degrees 49 minutes north and long. 7 degrees 25 minutes west.

THE total net expenditure for the maintenance of the U. S. Life-Saving Service during the last fiscal year was \$1,473,943. This amount supported 259 stations as follows: 189 on the Atlantic and Gulf coasts. 55 on the lakes, 14 on the Pacific Coast, and one at Louisville, Ky.

THE Light-House Board, through the Secretary of the Treasury, has submitted estimates to Congress for the construction of five new light vessels, two of which, small inexpensive craft, are for use on the lakes, an increase in the clerkly force and more suitable office accommodations at Washington is also asked for.

THE personnel of the U. S. Revenue Cutter Service is composed, when the grades are full, of 144 line and 78 engineer officers on the active list, 15 line and 20 engineer officers on the permanent waiting orders, or retired list, and when all vessels, building and repairing, are in commission about 1,000 enlisted persons of all grades or rates are included in the service.

The report of the Provisional Committee of the Pittsburg Chamber of Commerce on the proposed Lake Erie and Ohio Ship Canal appeared this week. The showing made as to the feasibility and benefits of a waterway from the Ohio river to the lakes is sufficient to strengthen the faith of those who have urged the beginning of such a work. The committee making the report states that it is a matter of congratulation that this project, promising such widespread benefits to commerce and manufacture, has been found practical within a reasonable cost, and will prove profitable to the capital invested in it.

The following vessels are laid up at Manistee: Schooners Cora A., A. W. Luckey, Dan Hayes, I. Sands, L. A. Simpson, Agnes Potter, J. L. Green, Arendal; steamers M. Marshall, R. C. Wente, Ida E., M. B. Covell, Minnie M. Waukon, Ossifrage, Islander, City of Charlevoix.

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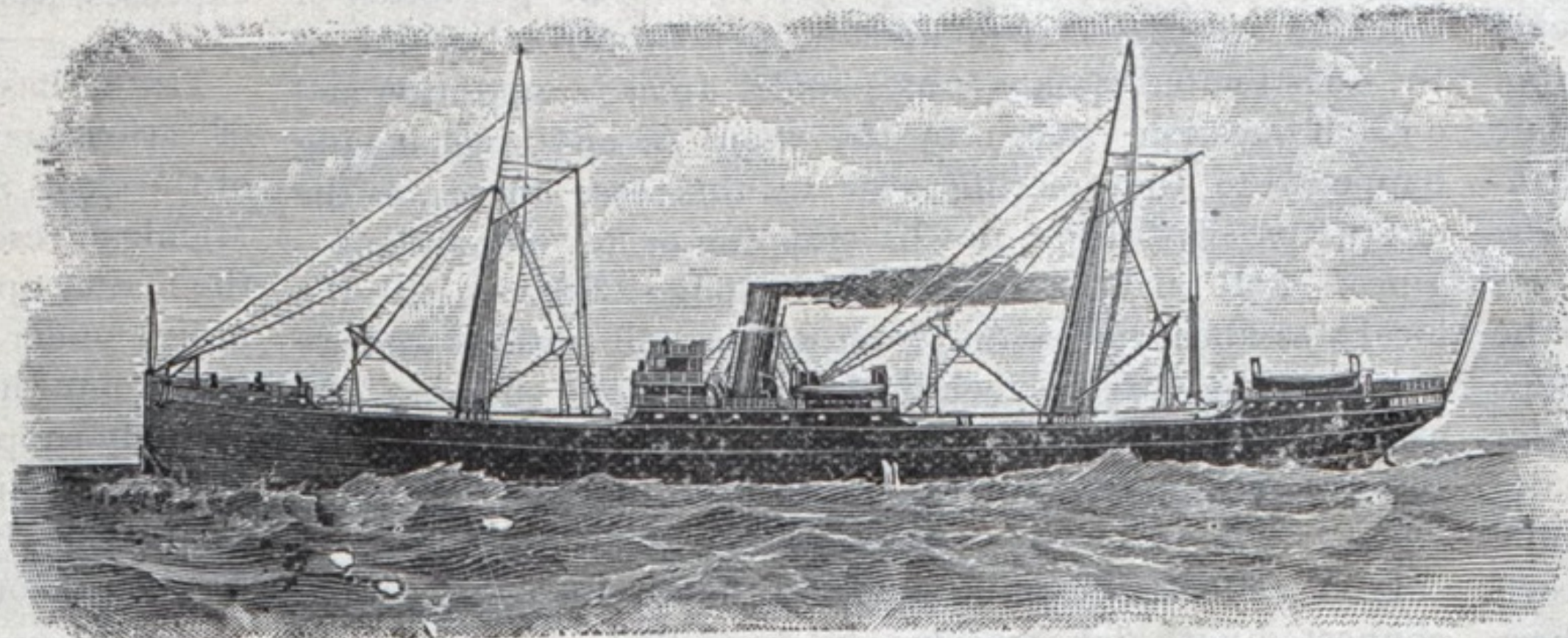
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WILL CRUISE ON THE YANTIC.

Since the ex-U. S. S. Yantic, which was consigned by the Navy Department to the Michigan Naval Reserve, arrived at Detroit, the members of the Saginaw division of the reserve have been wondering whether they would be given the pleasure of a cruise on the ship next season. As has already been stated, the vessel was taken to Detroit through the Welland canal at great expense. She will be stationed at Detroit, but it is probable that the running expense of the Yantic will be borne by the state, and if such is the case the Saginaw reserves will have as much right to the use of her as the Detroit divisions.

Lieut. Eaton, of the Saginaw division, recently wrote Lieut. Wilkes, commander of the Michigan battalion, asking him what his plans were about using the Yantic and whether the Saginaw reserve would be given an opportunity to board her for drill and practice. Mr. Wilkes replied that getting the Yantic to Detroit occupied so much of his time that he has had little leisure to decide just what use will be made of the vessel. But he said the Saginaw division would take its annual cruise on the Yantic with the Detroit divisions. He thinks it will be much better for all if the three divisions work together. Mr. Wilkes said that the inspector of the light-house district, who is a naval officer with the mark of commander has been authorized to act as instructor.

STEAM TURBINE PROPELLER.

A writer in Industries and Iron says of turbine engines: "The application of steam turbines to torpedo boats, destroyers, gunboats, and cruisers is to be anticipated from their unique capacity for developing great power and high speed with light and compact machinery. Apart, however, from these uses, it appears to me highly probable that they will in time be adopted in the mercantile marine. The conditions in a fast passenger steamer are favorable to the economical application of steam turbines, and in such steamers the smoothness of their running will be a strong recommendation. I see no drawback likely to detract from the advantages which they clearly possess. In applying turbine

engines to a large passenger vessel or warship, of say, 30,000 I. H. P., probably four screw shafts, with two screws on each shaft, would be driven by one compound turbine at a rate of between 400 and 700 revolutions per minute, and the turbines would consist of a high-pressure, the intermediate, and two low-pressure, each turbine developing approximately one-quarter of the total power. The screw propellers would be about one-half the diameter of ordinary twin-screw propellers, and the aggregate blade area would approximate closely to ordinary practice. With such engines the consumption of steam per propulsive power would probably be less than that found in the mercantile marine, and considerably less than that found in engines of war vessels, where space and other conditions must necessarily be considered."

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo	2,512,000	2,724,000	7,665,000	226,000	1,920,000
Chicago	7,793,000	6,795,000	1,495,000	592,000	883,000
Detroit	194,000	139,000	6,000	47,000	12,000
Duluth and Superior	1,295,000	1,374,000	973,000	959,000	521,000
Milwaukee	143,000	75,000	82,000	21,000	49,000
Montreal	102,000	64,000	380,000	38,000	34,000
Oswego	0,000	78,000	.....	.....	69,000
Toledo	276,000	345,000	309,000	38,000	.....
Toronto	43,000	.....	8,000	.....	46,000
On Canal .....	.....	.....	46,000	.....	.....
On Lakes	1,292,000	908,000	485,000	83,000	40,000
On Mississippi .....	.....	.....	.....	.....	.....
Grand Total	35,565,000	38,539,000	14,383,000	3,645,000	4,605,000
Corresponding Date, 1896	55,163,000	18,073,000	12,434,000	2,831,000	5,130,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific slope.

There are laid up at Chicago 134 boats with a grain capacity of 11,600,000 bushels. Most of these will probably be filled with storage grain at about 3 cents a bushel.

WEATHER PREDICTIONS ON THE RISE AND FALL OF LAKE LEVELS.

Assistant United States Engineer Mann thinks that the present winter will be a cold and severe one, with plenty of snow—what he denominates "an old-fashioned winter," says the North Star. Mr. Mann bases his belief on the periodical rise and fall of the Great Lakes. Sailors say that these lakes gradually fall seven years and then gradually rise for a like number of years, although of course each year has its period of high and low water. The low water mark is usually reached in December or January and the high water mark in June.

In December, 1895, after a gradual fall of nine years, the Great Lakes reached the lowest point on record. Since then the average yearly height of the water has increased, and Mr. Mann looks for a further increase for some years to come. As higher water means greater precipitation he argues that an abundance of snow will characterize the next few winters. Mr. Mann states that the records show the periodical rise and fall of the Great Lakes through a term of years, but that the length of the period varies from five to nine years.

IN WINTER QUARTERS AT BAY CITY.

The vessels in winter quarters on both sides of the river are as follows:

Steamers—T. S. Faxton and Handy Boy, Monohansett, Manistique, Robert Holland and J. P. Donaldson.

Tugs—Traveler, Niagara, Boscobel, Winslow, Sweepstakes, Charlton, Peter Smith, Ella M. Smith, Charlie O. Smith, Annie Moiles, R. H. Weidemann, Robert Emmett, Lulu Eddy, Mary E. Pierce, Sarah Smith, Howard, Mocking Bird, Little Giant, Maud S., Louise, Witch of the West, Parker, Geyser, Josie, Tempest, Fashion and Edgar Haight.

Barges—Montmorency, J. L. Ketchum, Agnes, G. K. Jackson, Mary E. Perew, T. G. Lester, Oneonta, A. W. Wright, Allegheny, Active, B. W. Jenness, White & Friant, Goshawk.

Schooners—Katahdin and H. A. Emery.

PORT HURON WINTER MOORINGS.

The following list of vessels are now in winter quarters at Port Huron, Mich., and Sarnia, Ont.:

Steamers.—Rhoda Stewart, Maggie Duncan, A. Sumner, Alaska, D. Leuty, T. D. Stimson, White Star, S. E. Curtis, Colorado, Ed. Jenks, K. M. Forbes, M. Groh, Britannic, City of Concord, Cleveland, Porter Chamberlain, H. E. Runnels, Linden, Pawnee.

Tugs.—W. A. Rooth, Boynton, Richardson, Angler, Thompson, Martin, Hoynes, Brockway, J. P. Clark, Stanwood, Spite, Dispatch.

Barges.—F. M. Knapp, Board of Trade, Scheutte, Keating, Dashing Wave, Granda, Wesley, Magnet, Constitution, Tyson, Stewart, Favorite, Spademan, Hale, Dunford, Moore, Robinson, Botsford, Smith, Manitowoc, Bloom, (John) Wesley, Atmosphere, Montana.

Schooners.—Hattie Wells, John Rice, A. J. McBrier, Clara Yuell, Mont Blanc, A. Jackson, C. Crawford, J. L. Quinby, H. J. Cleveland, Narragansett, W. Stone.

Yachts.—Joy, Alert, Zero, Viva.

SARNIA.

Schooners.—Southampton, Pandora, Jupiter, F. Campbell, St. Clair, Glenifer, M. L. Breck, Cataract, E. C. Roberts, Glad Tidings, Aurora, Azor, Carisande, Ed. Blake, Sephie Prussia.

Steamers.—Monarch, United Empire, Lillie Smith, Cambria (side wheel), Unique, Ontario, Tipikan.

IN WINTER QUARTERS AT LORAIN.

The boats now laid up in Lorain, O., besides the 18 boats of the Bessemer fleet which have already been enumerated are: Steamers Vega, Vulcan, Kaliyuga, Robert Wallace, Pontiac and R. R. Rhodes; schooners David Wallace, Three Brothers, Selkirk and Roscius; launch Dearest; tugs Cascade, Selah, Chamberlain, Oscar Folsom, O. J. True, Susie B., Daisy, W. H. Moore, Ciscoe and E. B. Toiwo; dredge Continental, besides a number of scows. As a number of these vessels will receive a general overhauling and a spring outfit, work is expected to be plentiful until the next opening of navigation.

PORTAGE CANAL BREAKWATER.

Members of the firm of Porter Bros., of Duluth, who have the contract for the construction of a harbor of refuge at the upper entrance to the Portage Lake ship canal, visited Houghton a few days ago to make arrangements for the delivery of the stone and hemlock and pine lumber which will be used in the construction of the breakwater. The amount of money involved in this contract is about \$350,000 and the work is to be completed by the summer of 1899. It is estimated that 5,000,000 feet of hemlock, board measure, will be required for the harbor of refuge alone, and an equal amount of pine for the superstructure. For filling purposes upward of 30,000 cords of stone will be provided.

CANADIAN "SOO" CANAL TRAFFIC.

From the report of Supt. Boyd, of the Canadian canal at Sault Ste. Marie, it appears that between the 1st of April and the 14th of December, the period during which the lock was in operation this year, the business of the canal was as follows: Number of lockages, 2,976; vessels passed through, 4,386; tonnage, 3,804,361. Canadian tonnage, 282,089. Last season the number of lockages was 3,042; vessels passed through, 5,188; tonnage, 4,397,363 tons, a decrease for the present season of 1,066 lockages, 802 vessels and 593,002 tons.

PAT AND THE ADMIRAL.

A strict rule promulgated by every successive commandant at the Navy Yard, prohibits smoking on Mare Island under the most stringent penalties. Admiral Miller, sauntering one recent afternoon through a distant part of the island, came upon an Irish laborer digging a trench and smoking a short, black pipe. He was puffing away serenely unconscious of regulations and with evident enjoyment. The admiral, who was in undress uniform, stopped.

"Don't you know, sir, that smoking is absolutely prohibited in the Navy Yard?" he said.

The Irishman looked up and, with a kindly smile, answered:

"Indade, that's true, but here am I all be mesself, wid not a sowl to say a wurrd to, and I thought I'd take a puff or two to relave the silence."

"The regulations are explicit, sir," rebuked the admiral,

"and the silence does not excuse you. What's your name, sir?"

"An' who may you be any way?" Asked the Irishman.

"I'm Admiral Miller."

"Ah 'tis the new admiral ye are 'Tis the fat job ye have, admiral. Be careful to cape it. Me name's Pat McGinnis."

"Report at my office this afternoon without fail, McGinnis," said Miller, who could hardly keep from laughing. At 5 o'clock poor Pat who had made up his mind there would be the devil to pay tramped over to headquarters and the orderly rushed him into the dreaded presence of the admiral, who said:

"Sit down, Pat."

Pat sat down. Miller touched a bell. The orderly appeared.

"Bring a bottle of champagne and two glasses," he said. Not a word was spoken until the wine arrived. The admiral filled the two glasses and pushed one over toward the Irishman.

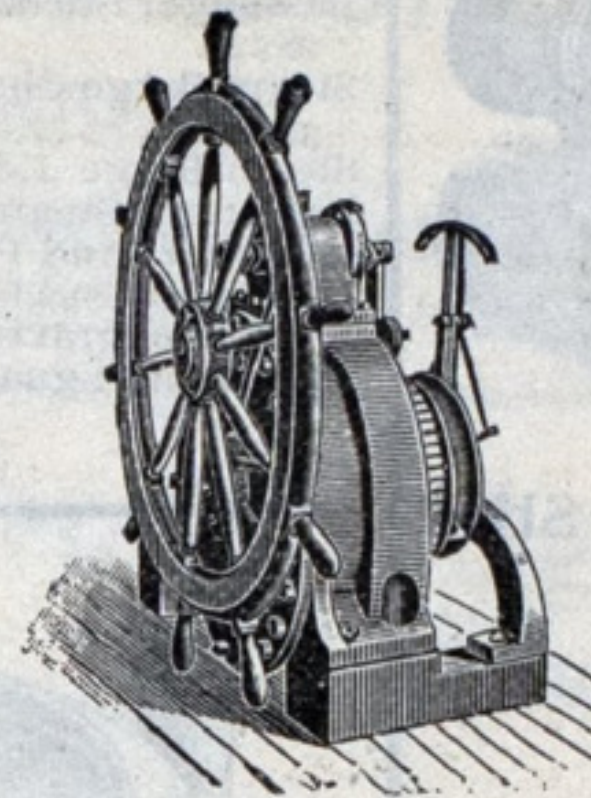
"Pat," he said, "give me the pipe. You'll not need it again."

The mystified laborer obeyed.

"Now," said the admiral, "drink hearty, Pat, but you'll keep your job as long as I'll keep mine."

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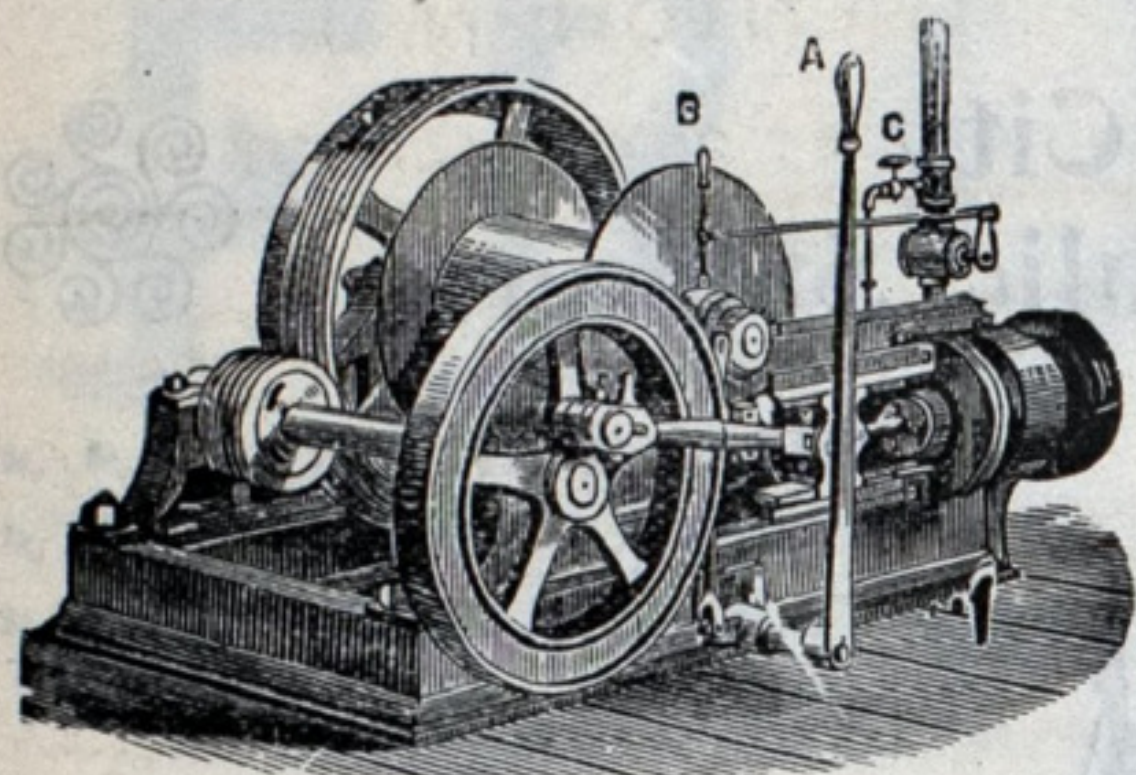
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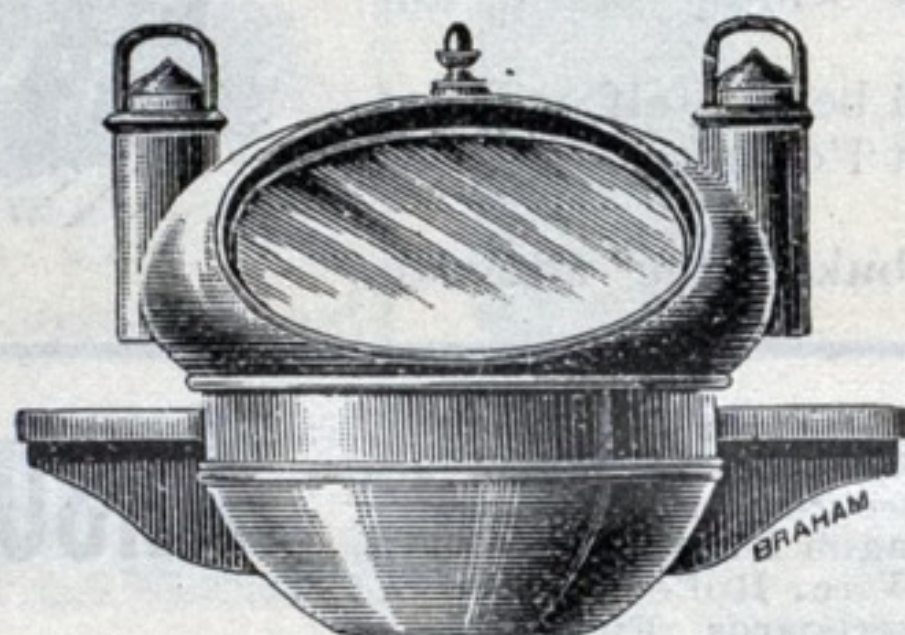
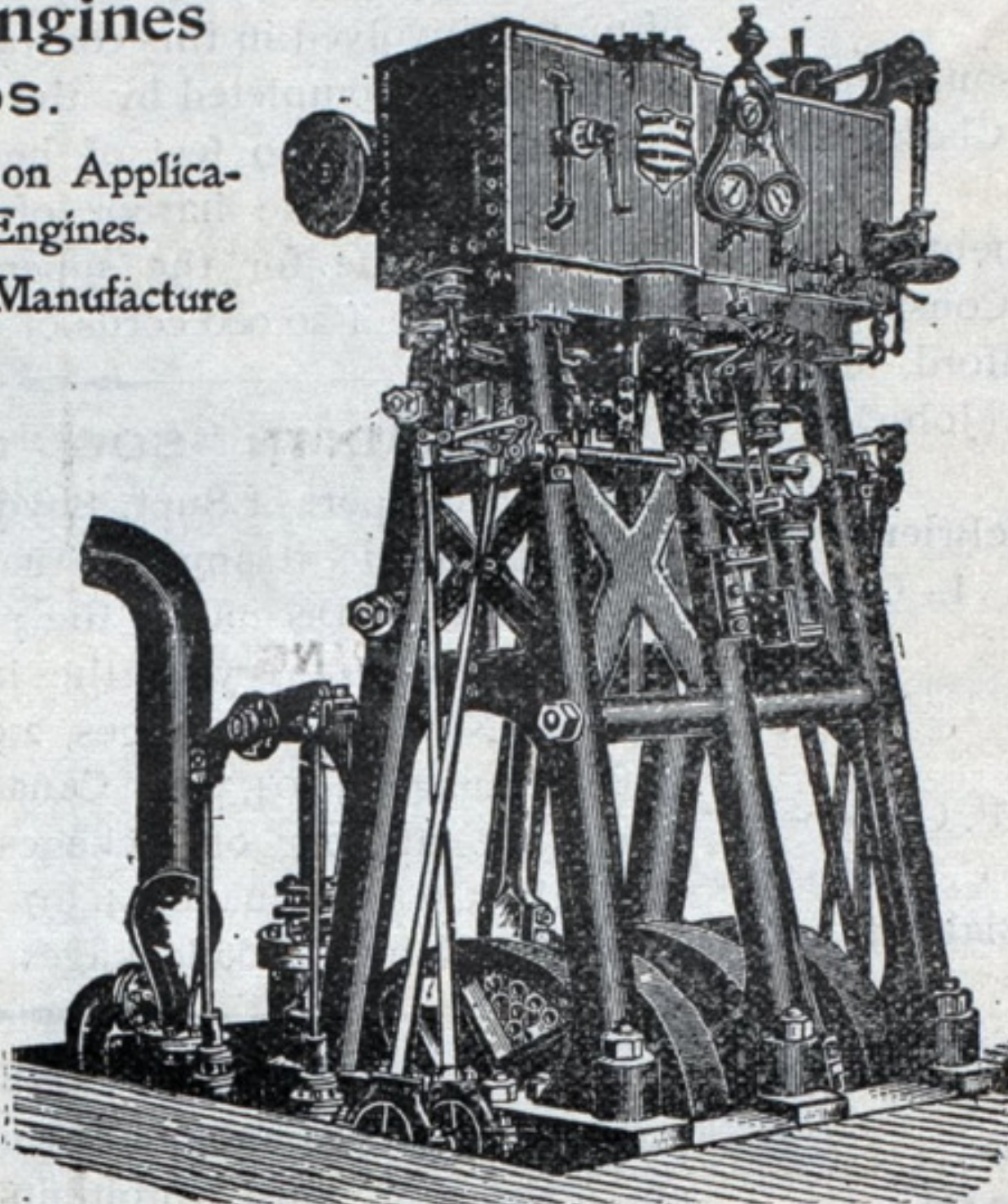
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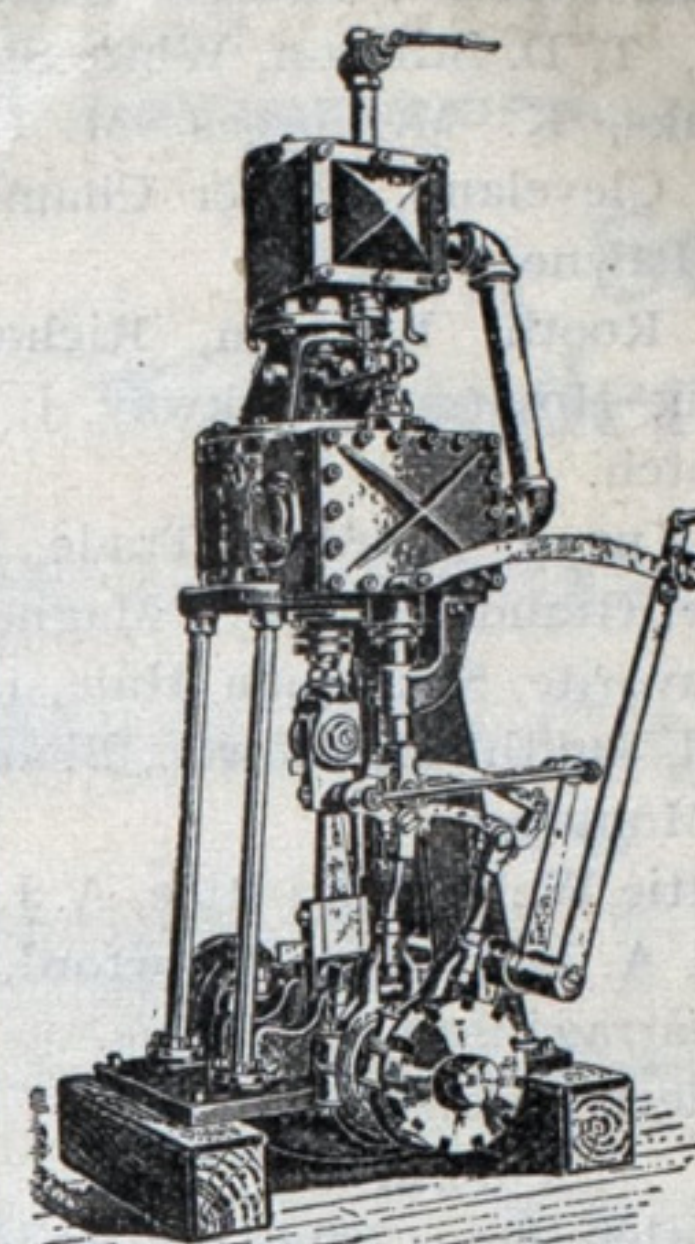
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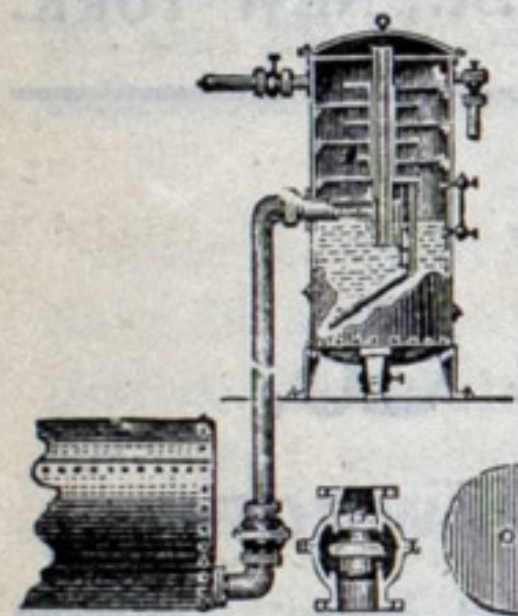
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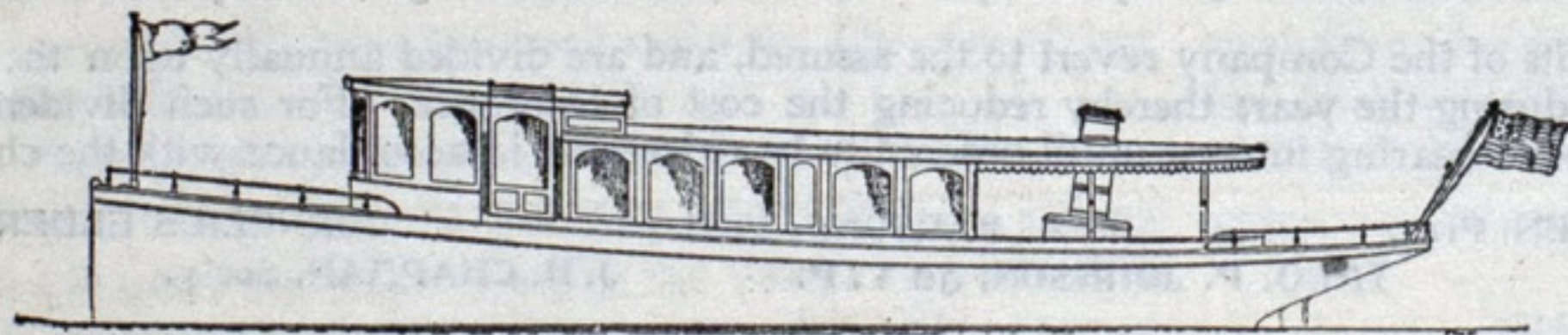
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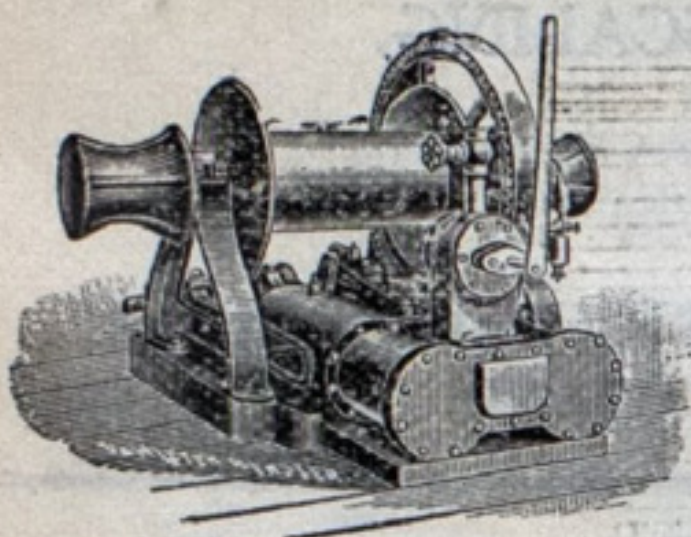
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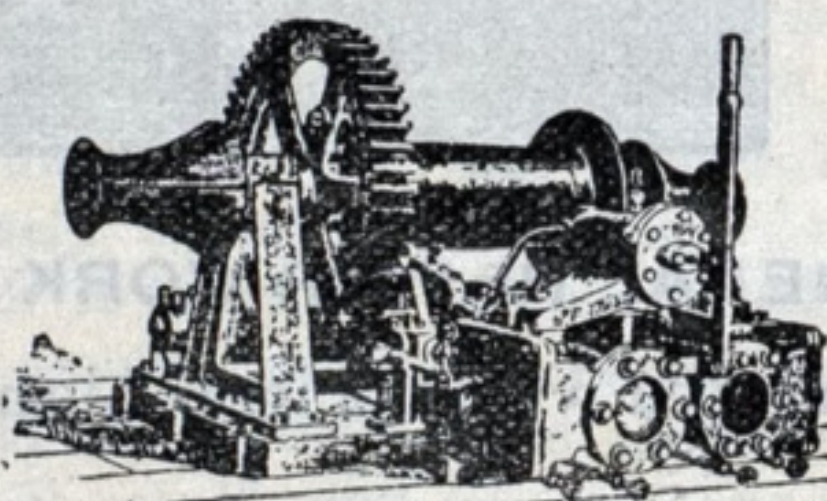
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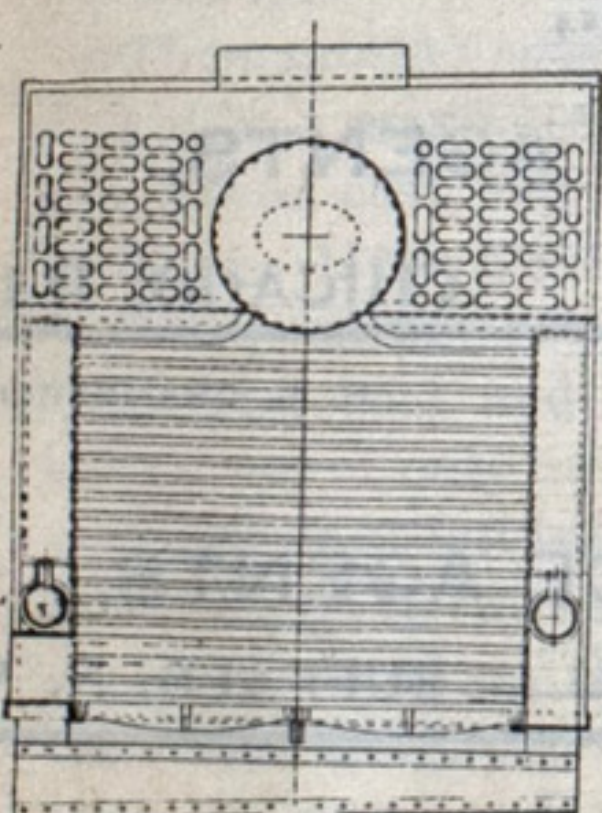


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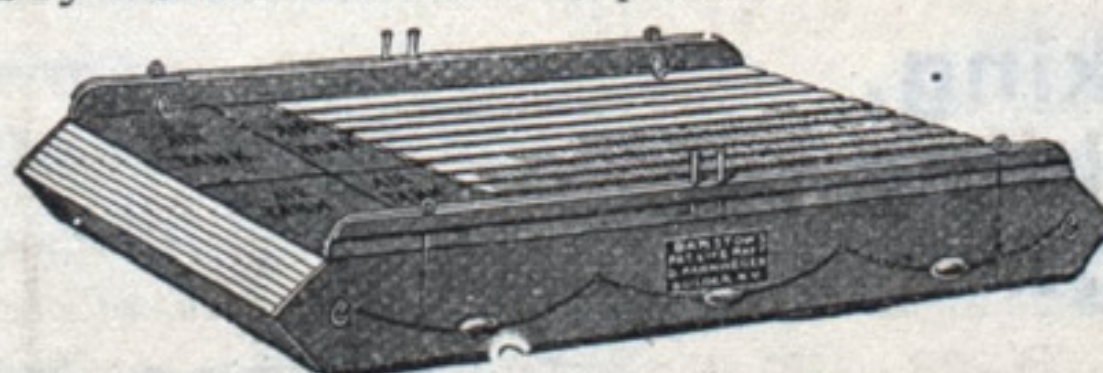
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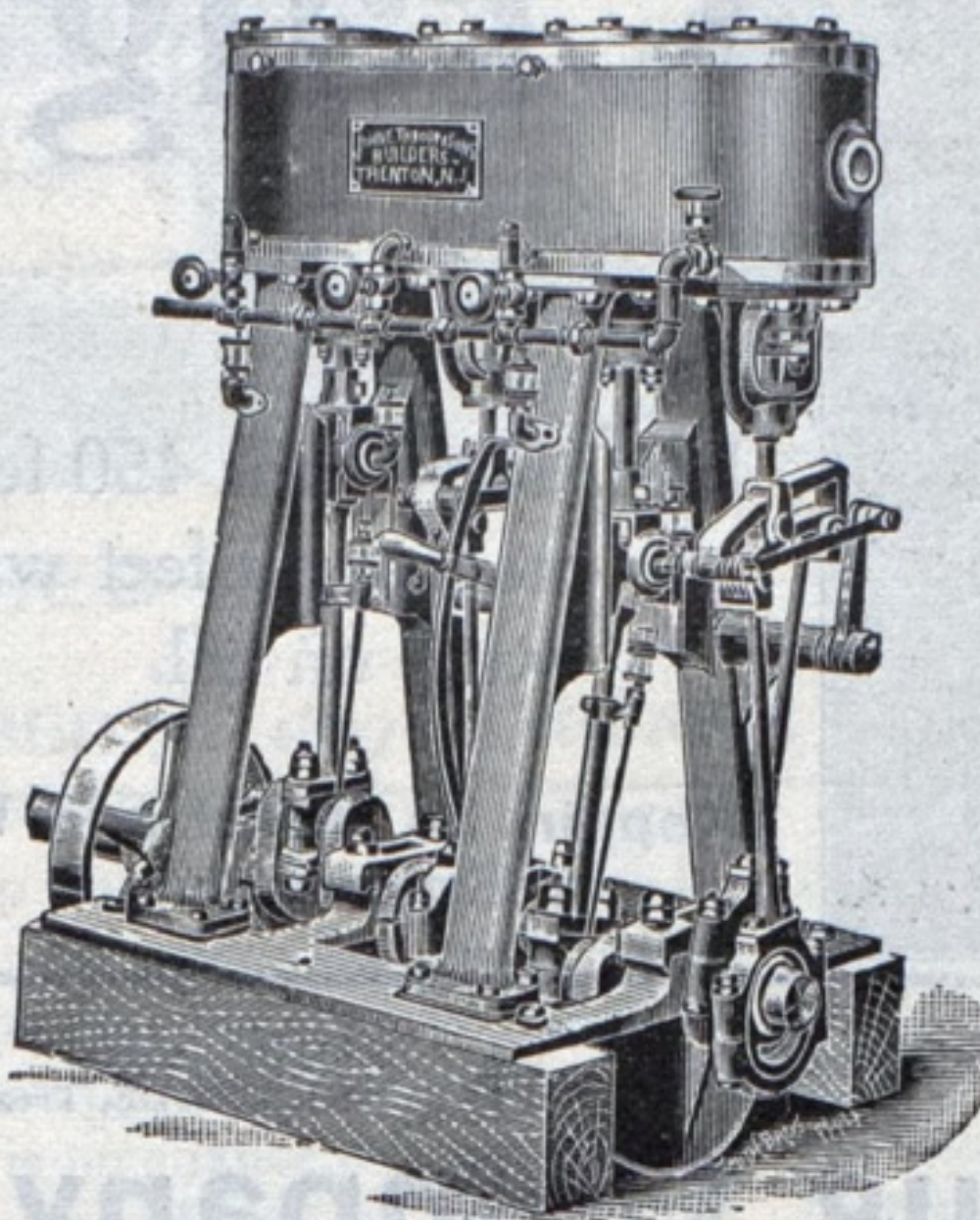
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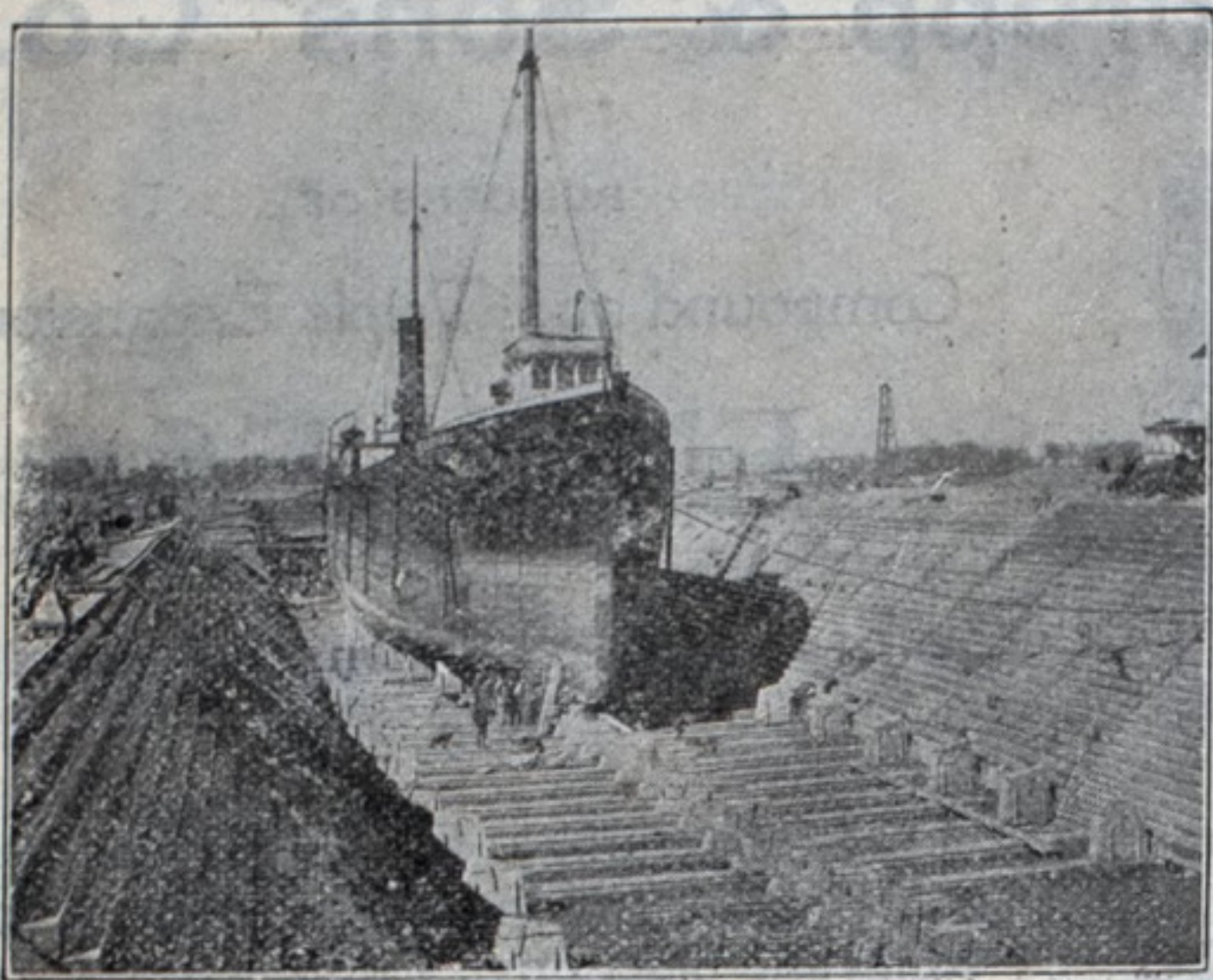
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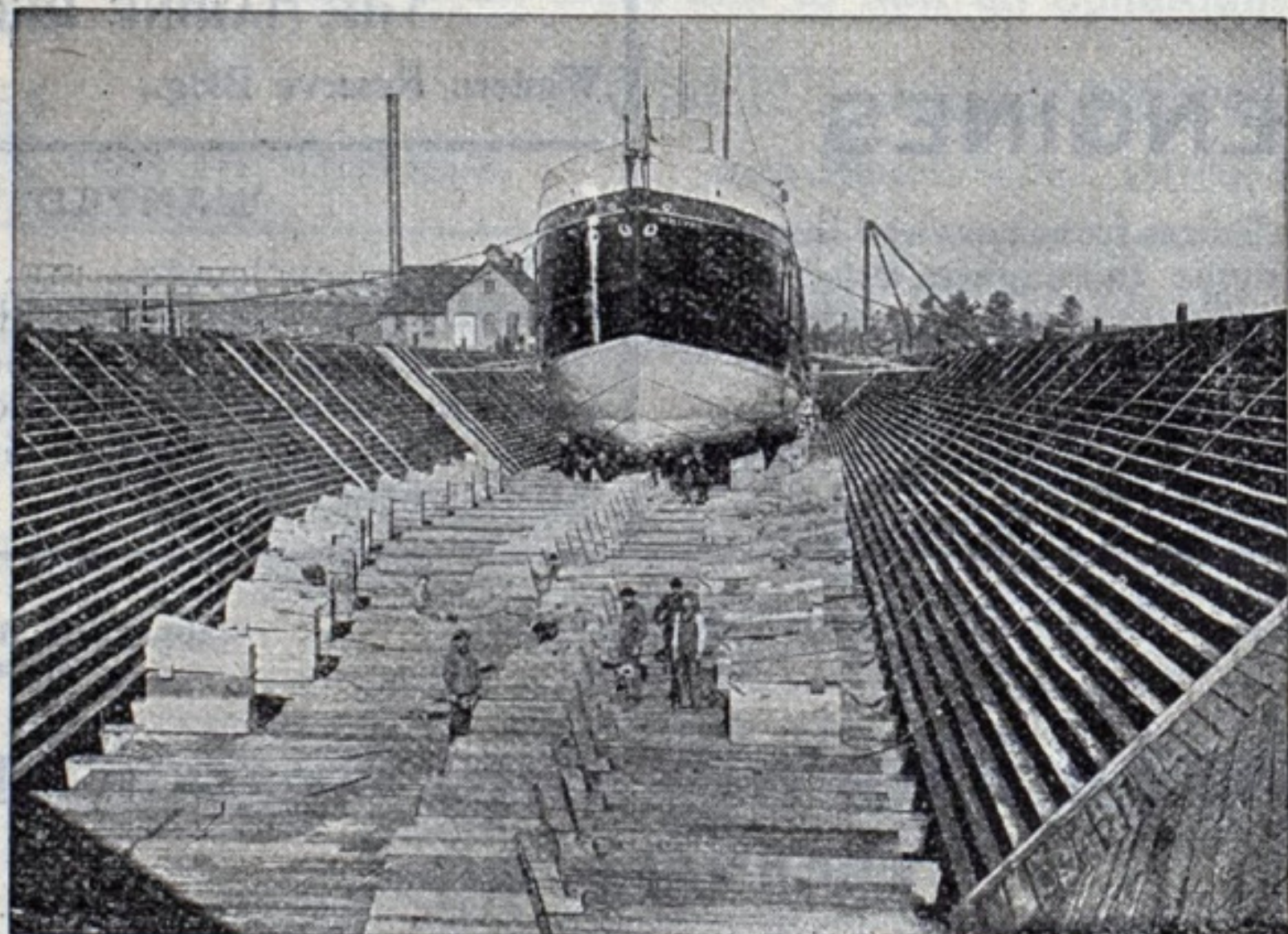
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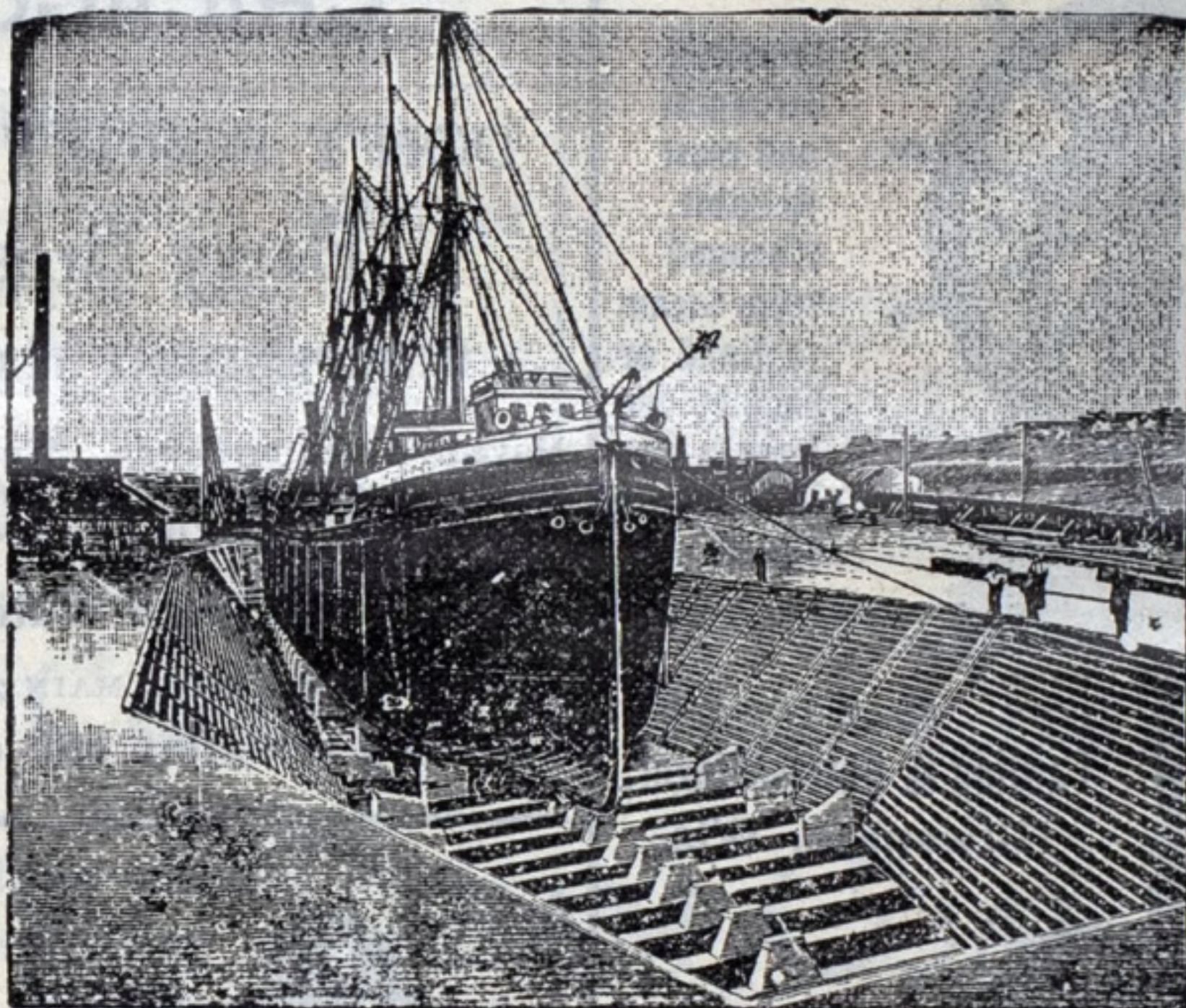
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